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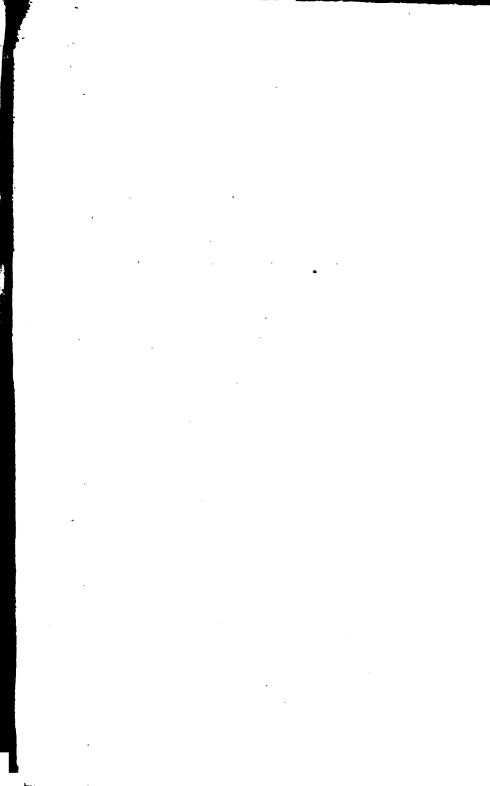
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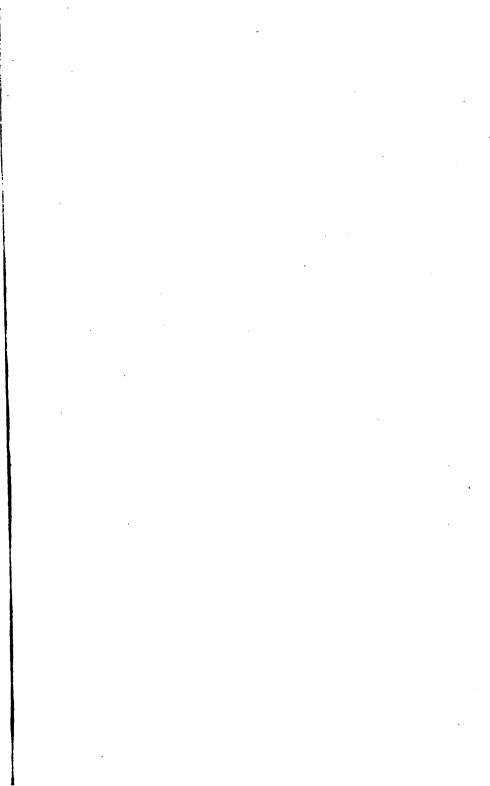
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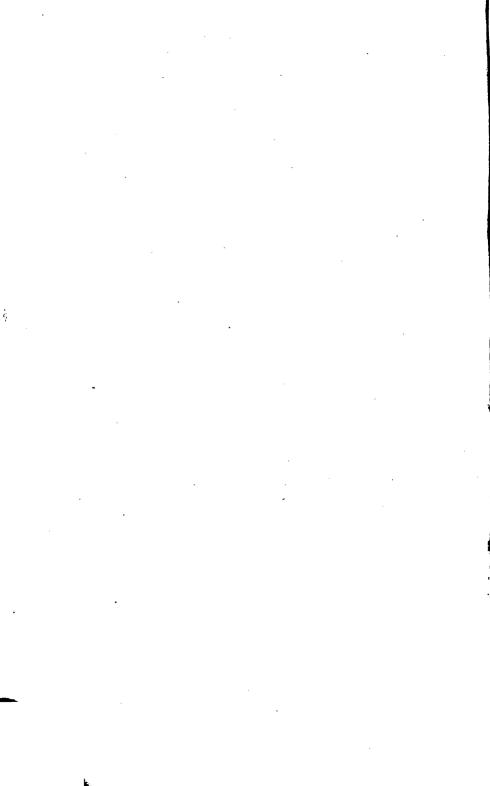
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THE

JOURNAL

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RATIONAL MEDICINE,

EDITED BY

C. H. CLEAVELAND, M. D.

VOLUME I.





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PREFACE.

In the present volume of THE JOURNAL GF RATIONAL MEDICINE is recorded the results, in part, of the efforts I have made during the current year to advance the cause of scientific and rational medicine, and to present that which appeared to be of practical utility to those who are engaged in the active practice of our profession, as well to keep the readers of the Journal informed of the progress that has been made in, and the improvements that have been introduced during the year, in all that pertains to the healing art.

In order to carry out the objects I had in view in the publication of this Journal I have chosen to keep it within such limits as to size and price as would lead to its being read by the largest number of physicians, and to so arrange and write the articles that they should be rational, pointed, and practical, and at the same time as brief as they could be made and yet present a clear and full exposition of the ideas that were intended to be expressed. To show that I have been able, partially, to carry out my designs, I need but to refer to the ample Index of the present volume.

That I have also at least partially succeeded in making my design understood and approved by the profession, is shown by the very large number of physicians who have aided me with their subscriptions, by the many letters of encouragement and commendation received from all parts of the country during the past year, and by the contributions to the columns of the journal, that have been sent me.

Of course I have not made the journal all that my friends wished and hoped. Least of all have I made it fully satisfactory to myself; but I have been fortunate enough to have so managed it as to cause not a single word of complaint from any source to reach me, and but one indication of a wish for a change of plan in any respect.

I have not been able in the short space of twelve months to make my journal embrace matters touching all branches of the science. Some of those of deep importance have been postponed until they shall be reached in natural order of subjects, or until they will become more seasonable. The articles on FEVER will be continued so as to include all the more important Eruptive and Inflammatory fevers, and thus present my views in consecutive order in regard to the causes, nature, and treatment of this important class of diseases.

(m)

In carrying out my plan of writing on diseasee of the Alimentary Canal, I had hoped to publish in the present volume an article on Diphtheria, but that has been unavoidably delayed and put over to the next. It, however, is already prepared for publication, and those who have been somewhat impatiently waiting for it may expect it in the January number.

The Alphabetical Notes on Materia Medica and Therapeutics, I am pleased to know, are attracting favorable attention, and I am encouraged to continue that most trying and laborious part of my efforts. During the coming year I shall publish several very important essays in that department of medical science.

To the Publishers of Books and Pamphlets I have been laid under great and frequent obligations, as the pages of my journal fully testify. The limited space that I could spare for notices of new publications has not allowed me to give any extended review of these works as they have appeared, but I have endeavored to present my readers a somewhat clear understanding of their nature and character and value, and hope to continue to do so in regard to future publications.

My relations with the profession, through the Journal and otherwise, have been so exceedingly pleasant during the year that has just closed, that I am encouraged to enter upon my labors for the one which is to follow with renewed effort, and greatly increased happy anticipations.

C. H. CLEAVELAND, M. D.

Cincinnati, December, 1860.

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Vol. I.

JANUARY, 1860.

No. 1.

RATIONAL MEDICINE.

BY THE EDITOR.

In the annals of Medicine, there has been observed a remarkable tendency on the part of a few, to claim for themselves the position of a *leadership* in the Science and the Art; and on the part of the great body of the profession to become almost unquestioning *followers* of the more active and positive few.

The most wild and extravagant notions have been promulgated and believed, and the most strange modes of practice have obtained, both in and out of the profession in different ages and different countries; and to express a doubt or dissent from the views and practices of the majority, has with very few exceptions, resulted in the maledictions and anathemas of those whose views and practice are thus called in question, however mildly the doubt may be expressed.

But within a few years there has been manifested a willingness on the part of individuals to break loose from the bonds the majority have submitted to, from those who have been installed as leaders in the profession; until now, perhaps, it is quite as common to meet physicians who do not profess to be the followers of any set of opinions, or of any man, as it is to meet those who endeavor to satisfy themselves and others by the use of a word or a name as indicative of their medical philosophy and professional practice.

With this avowal of the freedom and independence of individual opinion there has come into use one word which many times may have been abused, and yet which has been found so happily expressive of the position taken by those who have used it, that it has been adopted by many, and in various parts of the world.

"RATIONAL MEDICINE," is a term of modern birth, and yet even now has produced great results in the minds and the practice of

those who have heard it and even faintly understood its import. Many among the foremost in the profession have adopted it as their declaration of independence and freedom from all control except such as the pursuit of science and the demands of humanity and of justice impose upon all.

Some five years since, when Dr. Chambers' great work on Digestion and its Derangements, was given to the profession, the author said :-- "Besides the main design of drawing attention to the important function which is the special subject of this volume, the author has had in view the exhibition of an example of that mode of treating pathology and practice, which may justly be called RATIONAL MEDICINE—that is, the deduction of our rules for the management of disease from the scientific observation of health. In this lies the chief hope of continuing the recent advance of our art. The suggestions of physiology must indeed be confirmed and corrected by experience, and the mind must be kept liberally open to the teachings of that daily mistress, but the positions of the two must not be reversed; nor must either be put out of sight, as is done by those who would base treatment upon emperical discovery alone. One is a bridle, and the other a spur, and to use one without the other, is as dangerous as mere routine or a universal panacea; but united and in proper places, they conduct, I believe, to correct principles, and I know, to successful practice."

Something near a year since, M. Piorry, of Paris, wrote a long paper with the same objects in view as those avowed by Dr. Chambers, which was read before the Imperial Academy of Medicine, in which he endeavored to establish the following propocitions:—

- 1. The treatment of disease is founded, almost entirely, on our knowledge of anatomy and physiology, aided by physical and chemical facts, and matured by clinical observation.
- 2. Positive Therapeutics can only be established upon such knowledge as shall enable us to appreciate the causes, the development, and the effects of lesions which have been previously verified by a rigorously exact diagnosis.
 - 3. RATIONALISM, which ever since Descartes, has been the method

followed by genuine observers, must be the foundation of medicine, as it is of the other exact sciences.

- 4. Before seeking new remedies for a disease, we must learn to define exactly the existing organic and physiologic condition of the system, and carefully study the effects of known medicaments and hygienic agents upon this condition.
- 5. By far the greater part of the progress of therapeutics, is due to medical rationalism, guided by exactness of diagnosis.
- 6. Specific medicines, that is, those which are applied to an unknown cause of disease, and which are only discovered by accident, are very few, and ought only to be adopted in practice when they are adopted by rationalism, and the most positive diagnosis.
- 7. Some physicians err in censuring Rational Medicine (from which results a system of therapeutics characterized by good sense), in order to extol the treatment of specifics, which has no other foundation than accident, and is only supported by the fancy and credulity of an ignorant public, who are the enemies of science, and who are easily seduced by the marvels of mysticism, and by deceitful promises.

What has been so happily styled the rational practice in medicine recognizes the vital force as the great and most important agent in the cure of disease. As long as the vital forces can overcome and master the opposing forces, or those which produce derangement and disease, it alone is capable of restoring order and a normal condition of the system. But even then the art of man as developed in the healing art, can come in aid as an auxilliary to the vital forces, and thus make the struggle less fierce or more brief. Frequently when the vital force unaided by art is not able to overcome the opposing causes of disease, the proper application of remedial or hygienic measures in accordance with the teaching of scientific rationalism will aid in the restoration of health in cases, that without such assistance, must have been very much prolonged in the continuance of the disease if not ultimating in a fatal termination.

The heroic, or pertubative method of treating disease, so much in vogue in former times, and even at the present, with some who claim for their practice the title of regular in a pre-eminent

degree, is fast loosing the confidence of the people, and passing into merited oblivion. That method was founded on the assumption that disease must be removed by artificial means, and often by means in direct antagonism to the vital forces, which should be aided and freed from hindrance or embarrassment.

When carried to the extent fashionable even now, with some, this "heroic" treatment tends to undermine the vital stamina of the patient, to "ruin the constitution," and leave far more and far worse disorders than those it is designed to cure. It is of very recent date that medical teachers and writers have been willing to incur the responsibility of recommending the omission of "active" and "heroic" treatment in the management of disease, even of a mild grade.

But because irrational and unscientific practice has proved hurtful, rational physicians cannot be led to discard all medicines; for many morbid affections are occasioned either from a want of some of the normal constituents of the system, as in rachitis, chlorosis, starvation; or from the presence of some abnormal material, as in most forms of fever, in poisoning, and infectious diseases; or from an excess of the normal elements, as in plethera or surfeit; or from a combination of these two causes, as in some forms of scorbutis. And to assume that the art of the scientific physician is not equal to the detection and the supply of such wants when they exist; or to the detection and removal of the morbid cause of those diseases produced thereby, by the rational and judicious use of antagonistic agents, is an absurd assumption, clearly disproved by the daily experience of the profession.

Another, and not less important duty devolves upon the physician. It is to discover when he is *not* called upon to administer any medicine either for the purpose of supplying a want, or of destroying or expelling a noxious material from the system of his patient.

There are many forms and conditions of disease, where, if the vital forces of the patient are allowed to act without embarrassment or hindrance by medicine or otherwise, they will surely and speedily restore the organism to a healthy condition. It is the part of the rational physician to admit this fact, and refrain from

the "heroic" "perturbative" medication formerly so much in vogue, and indulged in even at the present day by many enthusiastic, ardent, but misguided physicians. He is to keep vigilant watch at his post, like the pilot of a ship, who with a close and careful observation of his chart and compass, while the ship pursues her proper course, simply keeps his hand upon the wheel, ready to correct the least departure of the noble fabric under his control, from the course that leads to her destined haven.

Not only must the sick be guided through the course of the disease and the convalescence, and protected from harm; but their sufferings must be palliated; and the art of palliation is so important as to occupy a large share of the attention and the time and efforts of every medical practitioner.

When the disease would, if left to be combatted by the vital forces of the system, result in a final cure, much can be done in way of allaying pain and in obviating unpleasant symptoms, as well as in avoiding unpleasant and painful complications. In these cases, the duty of the physician consists rather in cautious guidance than in active interference or meddlesome and ill-judged attempts to cut short the disease; especially should the physician protect his patient from the harmful and officious acts of warm-hearted and sympathising, but uninformed relatives and friends. With such, frequently the sins of commission are of far greater magnitude than those of omission. The physician should neither commit, nor allow the commission of either class of sins in the care of his patient.

It is the duty of the rational practitioner of the healing art to make himself so well acquainted with the science of medicine and its therapeutical resources, and the nature, tendency, and amount of disease in each individual patient under his care, that he will be able to judge when to act, how to act, and when to forbear acting, or when to give medicine, what to give, and when to refrain from giving medicine. To be able to do this with skill, with knowledge, and with judgment, is to be able to fulfill the functions of the practitioner in the highest degree.

ULCERATION OF THE STOMACH.

BY T. C. MILLER, M. D.

ULCERATION of the stomach may be caused by caustic substances taken into that viscera; by severe inflammation of the membranes of the stomach, resulting in ulceration; by inflammation of the glands of the stomach, also resulting in ulceration, particularly in nursing infants; by the softening of tubercles deposited in its walls; or by cancer with fistulas. These are all diseases of the stomach itself.

There are other conditions also, that produce a perforation of the walls of the stomach.

Hemorrhagic erosion is caused by various chronic diseases of the stomach. The immediate cause of this erosion is not known. It produces a small, circular, or oblong destruction of the mucous coats of the stomach, with a dark red edge, often covered with a dark or bloody exudation. Sometimes the edges of the ulcer are puffy and everted. This class of ulcers are sometimes to be found in clusters, but at first are usually few in number and isolated, and only after a time increase in number. This kind of ulcers as their name imports, are subject to frequent, and sometimes severe hemorrhages.

Simple chronic ulcer of the stomach, sometimes called spontaneous perforation of the stomach, is one of the most frequent forms of this disease, but most frequently met with in females, at from twenty to thirty years of age. It is usually to be found with a debilitated condition of the system, but more particularly if the debility has been caused by Bright's disease of the kidneys, disease of the heart, or tuberculosis of the lungs.

Usually there is but one ulcer that has perforated the entire walls of the stomach, and that is more frequently situated in the back part of the stomach, on the smaller curvature, or near the pyloric orifice. At first the ulceration is usually round and small, but as it increases in size the edges become irregular, with a change in form and outline, and may increase in size, even until the entire stomach is surrounded as with a girdle. This form of ulcer has usually flat and lax edges, but they are sometimes infiltrated and callous,—with an inclination to increase the depth of

the ulceration by an erosion and waste of substance, even until the serous covering is destroyed, and the ulcer breaks into the cavity of the abdomen. But sometimes the inflammation extends by contact to the neighboring organ, producing adhesion, and thus preventing an opening into the peritoneal cavity. When the ulceration extends through the walls of a blood vessel, hemorrhage occurs.

When an ulcer in the stomach heals it does so with a superficial cicatrix, that, when the ulcer has been large, causes a scar that is usually surrounded with a radiated roll of the mucous coat, but sometimes with cord-like edges, causing deformities and discolorations of the stomach; particularly when at the same time with the ulceration in the stomach, the neighboring organs are inflamed and become adherent to that viscus.

Ulceration of the stomach may exist without causing any symptoms that will indicate its presence until perforation and a sudden fatal termination reveals the nature and extent of the malady. The symptoms produced by the rupture of the entire walls of the stomach are those so admirably described by my brother, Dr. L. E. Miller as follows:—

"The attack is usually very sudden and with the most violent and excrutiating pain in the gastric or abdominal region, with quickly supervening symptoms of acute enteritis except that vomiting is usually not present. Medicine is often incapable of affording any relief, and death takes place in from twelve to thirty-six hours. The patient is usually entirely conscious although suffering from intense agony. Frequently the death is very sudden, immediately after the attack. On post mortem examination in most of the fatal cases it is discovered that the perforation is on the lower curvature of the stomach near the pylorus but more rarely they are found in the small intestines. Only one perforation has been found to exist in any case where the stomach was the seat of the disease, while if the intestines are perforated there may be several holes.

"These openings are circular, which evidences that they commenced on the mucous membrane and penetrated outwardly. The surrounding mucous membrane is not congested, swollen, or changed in color. The opening has sharp, well-defined edges, with the appearance of a corroding ulcer. The majority of those who have recorded their observations of this disease, consider it specific in its form and standing in close connection with the condition of the blood and of the nervous system, because it is not necessary that the perforation should extend entirely through the walls of the alimentary canal to produce death. The so-called "impression digitata," have caused death where the perforation was not perfect.

"The sudden appearance of the disease, with the extreme pain which is not relieved by *position* as colic is, together with distortion, amazement and agony of the countenance, prevent it from being confounded with gastritis tunica, where *vomiting* is the pathognomic symptoms, and where every little motion increases the misery and pain in the stomach.

"This horrible form of gastroborus, which suddenly attacks persons apparently in good health and without any premonitory symptoms or the least warning, sometimes producing death in a few hours or at most in a few days, manifests its character more by the countenance and the gestures of the patient than by any There is no other form of disease which runs its other method. course as rapidly and produces such intensity of suffering and such restlessness and doleful cries and complaints. The features are distorted and express the highest amazement; the gestures indicate the most terrible torture. The patients cannot remain long in one position. The pain at the epigastrium and in the back of the spine corresponding with the epigastrium, compels a constant change of attitude and position, now rising from the bed. and now returning to it. Every movement is hurried; the words are uttered in a hasty and abrupt manner, and the patient appears to be tormented until death occurs.

"This extraordinary and deadly anxiety, connected with the uninterrupted doleful accents of complaint, and the full and perfect consciousness of the patient, are generally sufficient to direct the physician's attention to the true nature of the disease, especially as all these various symptoms cannot be produced by any other form of disease of the stomach and intestines."

The symptoms of ulceration not terminating in, or not yet having reached the stage of perforation, when any are manifested

are; the usual symptoms of a chronic affection of that organ, as dyspepsia, chronic vomiting, pain, sometimes thirst, frequent obstruction of the bowels. When the ulceration has penetrated the walls of a blood-vessel there will be vomiting of blood and an anæmic condition, and a moderate wasting away of the body with a tendency to ædema, and great irritability of the nervous system. When the ulcer produces perforation, the symptoms described by my brother will present themselves. Even after cicatrization, there will be considerable disturbance of the functions of the stomach.

The usual course of an ulcer is quite slow, but at times it is surprisingly rapid in its progress.

The results following ulceration not terminating in perforation, are; restoration with cicatrization, and perhaps prolonged disturbance; adhesions to other organs; destruction of the walls of a blood-vessel and hemorrhage, perhaps with a fatal termination; and perhaps death from marasmus.

The treatment consists simply in the use of mild and suitably nourishing diet, avoiding everything tending to cause irritation; strengthening the system by placing it in a condition for the easy performance of its functions; and keeping the bowels properly open, by the use of mild, and even nourishing injections.

As palliatives, morphia, or gelseminum may be given to allay pain or subdue excitement; but given as a general thing after eating; tris-nitrate of bismuth and charcoal, with perhaps a little rhubarb, may be of use; and to promote cicatrization, a weak solution of the sulphate or chlorate of zinc will be found of use.

But the iodide of potassium must by no means be neglected in ulceration of the stomach, to be given in very small doses in solution. It relieves the pain and nausea more readily than any other medicine, Conium moculatum is also valuable in this disease.

For the specific complications, as catarrh of the stomach, hemorrhage, gastritis, etc., the remedies appropriate to each will be indicated.

Alcohol must not be given in any form, as it is quite certain to increase the suffering of the patient. Sugar, also, sometimes causes severe distress.

THE PHYSIOLOGY OF THE MOUTH.

BY C. H. CLEAVELAND, M. D.

Those whose professional labours in part are devoted to counteracting and repairing derangements and diseases of the teeth, do not require any arguments to convince them of the importance of a clear and distinct understanding of the physiology and pathology of the buccal cavity; for the actions in health and in disease of the structures of the mouth, and of the entire alimentary canal even, have an important influence not only on the natural teeth, but also upon the materials used by dentists in repairing the ravages of disease. And practitioners of medicine are interested in the condition of the mouth, both because all matters of food, and nearly all articles of medicine have to traverse the mouth ere they can enter the system, and in their transit are liable to be influenced by the peculiarities of the secretions of that cavity; and also because the condition in health or disease of the alimentary canal is judged by the appearance of the mouth, or of its lining membrane.

The mouth, in common with the entire extent of the alimentary canal, is supplied with

Epithelium,

Blood-vessels and blood,

Nerves.

Muscles,

Mucus,

Water,

Media of Solution.

It also has,

Glands, and

Saliva,

in addition to its more solid structures, which however have far more to do with its anatomy than with its physiology.

The epithelium of the mouth is in many regards like the skin which covers the body externally, but it is quite thin, delicate, and translucent; lying upon, yet scarcely concealing the papillæ. It is made up of minute cells whose sides are closed to each other, and thus form scales, which are bent down and lie upon each other very much like tiles upon a roof, in layers, and not in a mass.

Each of these scales retains its characteristics as an individual scale, with an interval between it and its neighbor, and yet sufficiently close, that the mouth may be subjected to a considerable amount of hard usage and yet receive no apparent injury; and the scales themselves are not materially changed by ordinary mechanical or chemical impressions.

This entrance to the prima vie appears to be paved, so as to allow hot or cold food and drinks, acids and alkalies, fluids and and solids of all kinds to pass on these scales over the papillæ without making any apparent impression upon those delicate structures, while the interspaces between the pavement scales allow a free passage to the fluids in the mouth to be absorbed, or the fluids within the tissues to pass into the mouth. These epithelical scales are greatly modified in character and appearance by the nature of the fluid which they are acted upon; those changes being the result of the action of the fluids upon the scales and not of the epithelium upon the fluids.

On the tongue, the power of the mucous membrane to form epithelium is manifested in a marked degree. Usually large numbers of epithelical scales can be scraped off with the blade of a knife. And as this formative power is very much more marked upon the tongue than upon parts of the mucous membrane lower down in the intestinal tube, a slight change in the stomach becomes quite apparent in the changed appearance of what is called the coating of the tongue.

If the epithelium is formed too rapidly, and is so tenacious as not to be readily wiped off with food, and especially if the individual does not take into his mouth any solid food to wipe off the epithelium, as in many acute diseases, it must coat the tongue.

If the end of the cell or scale remains quite adherent to the skin while there is a considerable moisture in the mouth so that the scales do not lie down, but stand on end like the pile on velvet, the tongue is said to be "furred." If the scales are less adherent, and falling down between the papillæ become soft and swollen, the tongue will be even, smooth on its surface, and "creamy." If the epithelium is rapidly thrown off, or not readily formed, and especially if the parts beneath are inflamed, and the tongue becomes dry, it will be red and "raw." If the blood does not circulate through

the tongue readily from general debility, a loss of blood, or other cause, the tongue spreads out, becomes flabby, receives the impressions of the teeth, and has a "pasty" appearance.

We are not to suppose that the mouth alone is affected when these changes appear, but to reflect that the mouth is a part of the alimentary canal and in intimate relations with other parts of it, and particularly with that portion of it above the pyloric orifice of the stomach; and that changes in other parts of the canal quickly make themselves manifest by changes in the appearance of the mouth; and that by observing the condition of the mucous membrane of the mouth we can often judge quite accurately of the condition of the membrane lower down.

The blood-vessels of the mucous membrane are almost infinite in multitude, and are situated immediately beneath the thin translucent epithelium, are filled with blood, even the capillaries in this part of the system being of sufficient calibre to admit the free transmission of the red corpuscles of the blood. The blood, from the number of the red corpuscles in it, is quite red, and the blood-vessels of the mucous membrane of the mouth are so very numerous that the amount of fluid within these vessels equals the amount of solids in the walls of the vessels and the membrane both combined.

Hence the mucous membrane, including the blood, may be said to be half fluid.

But this fluid in the mucous membrane of the mouth is by no means stagnant as the waters of a marsh or bog, but circulates with a ceaseless activity which has much to do with the absorption of fluids from the mouth, for endosmotic absorption is greatly influenced both by the amount of surface of the enclosed fluid exposed to the endosmotic action, and also by the rapidity of the circulation of that fluid.

It is always well to bear in mind the conditions of governing osmosis, and it is particularly important in connection with the physiology of the mouth in which osmosis bears so important a part; and therefore the presentation of those conditions, in this connection, although somewhat digressive, cannot be considered entirely out of place. In regard to the osmotic circulation of fluids through membranes, it has been observed:—

1. When a membrane is interposed between two fluids of dif-

ferent densities, the fluids will pass through the membrane in both directions, but the fluid will pass from the rarer fluid to the denser with far greater rapidity than from the denser to the rarer.

- 2. If the denser fluid is in motion, the activity of the current to it is increased in proportion to the activity of the motion in the denser fluid.
- 3. If the dense fluid is alkaline and the rare fluid is acid, the current through the membrane will be accelerated.
- 4. If the dense fluid is warmer than the rare one, the increase of temperature will also aid in increasing the activity of the flow into the warmer fluid.

Not only is the epithelial membrane filled with large blood. vessels, but as is admirably shown in the plates of Harsall's Microscopical Anatomy, and by Ford and Bowman as reproduced by Kolliker and Salter and others, but the papillæ are supplied with loops of vessels that make up a large proportion of their entire bulk, thus increasing the amount of surface of membrane exposed to the osmotic action.

The conditions that favor the passage of fluids from the mouth through the epithelium and the wall of the blood-vessels into the blood, are:—

The blood is more dense than the fluid within the mouth,

The blood is in active motion,

The blood within the vessels is alkaline, while the fluid in the mouth is usually acid, and

The blood is usually more warm than the fluids in the mouth. As liquid is being constantly poured into the blood vessels, the blood would become less dense and absorption impeded, but that there is an enormous evaporation of water constantly taking place from the lungs and the skin, and no inconsiderable drainage through the kidneys. The kidneys, the skin, and the lungs are thus constantly engaged in removing water from the blood as fast as it is supplied through the mucous membrane.

There are other circumstances that have an influence on this osmotic or membranous circulation which are worthy of note. This activity of the motion of the blood is greatly modified by the condition of the nervous system. The sudden suffusion of the cheek with blushes, or the palor produced by fright, are illustrations of

the influence of the nerves upon the circulation; and there are certain substances that when brought in contact with the epithelium, interfere with membranous circulation. Tobacco is a familiar illustration of this fact.

TYPHUS CEREBRO-SPINALIS.

BY LEWIS E. MILLER, M. D.

This is the disease which has recently prevailed in some sections of this country, and has been erroneously called "Brain Fever." It is not seldom seen in cases of enteritis, or the so-called typhoid fever, with symptoms either of irritation of the brain or of depression of that organ; which conditions were distinguished by Peter Frank by the denomination of *Febris nervosa versetalis*, and *Stupida*.

But this condition often appears as a primary and distinct disease. Some years since it appeared in France, Italy, etc. It appeared as an epidemic in the town of Dax, in 1838, and from thence it passed through France toward Brousais in two directions; one in the south-west in Baronne, passing along the shore toward the north, and bending around toward Metz and Strasburgh. The other went south-east from Narbonne and Perpignan, thence northward to Lyons. From both sides of these lines of travel the disease extends as it were in rays, to the interior parts of the kingdom, pursuing no distinct and uninterrupted line, and not appearing as an epidemic in all its ramifications, but rather in isolated places, and as it were sporadically, and perhaps from thence assuming an epidemic condition.

In 1839-41 it appeared in some towns in Naples, where it was known by the name of *Typhus convulsus apoplecto-tetanus*. It was at Gibralter in 1844, and in 1847-8 in Nismes and Orleans, and Rash states that it appeared in Algiers, and also in Wirtemburgh on the Alps.

Post-mortem examination reveals congestion, inflammation, and suppuration of the pia-mater of the brain and spinal marrow; and between the pia-mater and arachnoid membrane an effusion of a milky, semi-gelatinous fluid, and a muddy appearance of the

arachnoid. In other cases there are drops of yellow purulent matter along the walls of the blood-vessels, or ribbon-like strips of a yellowish-white substance on the surface of the brain, mostly at its base, on the surface, between the two lobes, and in the course of the blood-vessels; also on the spinal marrow, and particularly on the anterior surface of it. According to Corbin, the brain is also softened. Sometimes a softening is observed in the spinal-cord, but of a less marked character than that of the brain. Frequently there are found globules of real pus, but always under the arachnoid, and sometimes at the origin of the spinal nerves.

The intestines are usually unaffected by the disease, but are sometimes congested in spots, and occasionally softened or thickened, especially at and around Peyers glands, near the ileocæcal valve.

The symptoms manifested in the different epidemics vary greatly in character. Sometimes the disease is very sudden in its invasion, the patient suddenly turning round and round in a circle, or falling prostrate. But usually there are premonitory symptoms for eight or ten days before the severity of the disease is manifested. These premonitory symptoms are similar to those that preceed other febrile attacks, yet the severe headache and pain in the back are somewhat peculiar and may aid in diagnosis.

The patient may be attacked with a chill, sometimes amounting to ague. This chill passes off in a burning heat, and the pulse becomes hard and full. The thirst is tormenting. At first the mind of the patient is excited, his face is flushed, his look lively; the boring, stinging, biting headache becomes insufferably violent, entirely banishing sleep, and the patient throws himself about in the bed. He is sometimes quite stupid. There is constant want of appetite, nausea, perhaps vomiting; and constipation.

The pain passes from the head to the neck, back, and extremities, and is increased by the slightest motion, and hence the patient cautiously avoids making any. The general sensibility at first is usually greater than natural, the slightest touch causing pain. Corbin, however, observed in the epidemic at Orleans, that there was an absence of the normal sensation, amounting to anæsthesia. A sense of formication is often present.

Trismus, tetanic stiffness, ringing in the ears, deafness, intolerance of light, rarely strabismus, and in more rare cases, obtuseness of the sense of touch, appear even in the earlier stages of the disease. After a few hours or perhaps days, the head is drawn backward, the muscles of the neck and lower jaw become contracted, the trunk stiff and motionless, the whole body trembles, or suffers tetanic shocks. The delirium becomes persistent, or returns after very short intervals, and is usually of a furious character, with great apparent muscular strength, with nervous twitchings, grinding of the teeth, and convulsive movements of the facial muscles, and contraction of the extremities.

Phlycteens appear upon the lips, apthæ in the mouth, milliary eruptions on the chest, with petechiæ. The tongue becomes full of fissures, the abdomen painful and tender, particularly in the theo-cæcal region, (in Versailles intestinal worms were often observed in this disease,) and the urine becomes dark and diminished in quantity.

As collapse occurs, the pupils are unevenly distended, the pulse slow, sensation obtuse, the patient nearly or quite insensible, the nostrils dry and dusty, the conjunctiva covered with a mucus, the limbs relax, the face is covered with moisture, the power of vision is lost, the speech is indistinct, the dejections are involuntary, the breathing is rattling, and the patient dies without any apparent pain.

Prof. Dolley has published an account of its appearance in this country at different times, when the epidemics have been called by different names. He says:—

"The disease manifests itself with chills, nausea and vomiting, severe pain in the head, etc., soon followed with fever, delirium, impairment of hearing and sight, and finally with coma more or less complete, and in some instances convulsions. What may be known as petechial spots upon the surfaces and echymoses, are characteristic symptoms, and numbers have died within twenty-four and thirty-six hours after the invasion of the disease. Those who have seen the disease as it prevails in the eastern counties, represent it as manifesting a similar train of symptoms. It has generally been regarded as an epidemic form of acute cerebral inflammation and treated accordingly, mostly by venesection, ca-

thartics, revulsives, etc. It may be well to inquire whether this view of the malady is a correct one, and whether a similar or an identical epidemic has not prevailed in some portion of the country at former periods.

"In the year 1810, and for several subsequent seasons, an epidemic prevailed in various parts of New England and the eastern counties of New York and the borders of Canada, known by various names,—as, "Spotted Fever," "Phrenitis Typhoides," "Malignant Nervous Fever," "Typhus Syncopalis," "Sinking Typhus," etc. One acquainted with the disease as now prevailing can not fail to observe the close resemblance between it and this early epidemic as minutely described in the old writings of Drs. Miner, Tully, Thatcher, Page, and others, and in a report before the Massachusetts Medical Society in 1810.

"Thatcher says, "In the winter of 1813 it visited the army of the United States at Greenbush and at various other places, where its destroying power has scarcely been exceeded by military slaughter." Drs. Miner and Tully remark that, "Spotted fever, like other epidemics, has almost infinite gradations in its rapidity, severity, and mortality. In some seasons, and in individual cases, it is comparatively mild; in others, it is much more rapid and fatal than the cholera of India, or the plague of the Levant. No foreign author, it is confidently believed, has ever described this disease." It is shown to differ very essentially from the Typhus Petechialis, and other forms of typhoid disease of European nosologists. usually occurred during winter and spring, and in some instances was protracted until May and June. Dr. Miner represents the disease as appearing to have its seat and throne in the brain-to belong nosologically to the passive phlegmasiæ. It is attended with no spontaneous reaction. This is manifest by the greatest arterial debility, typhoid delirium and convulsions, paroxysms of subsidentie, -in a word, by every symptom which is known to indicate an extreme deficiency or exhaustion of the powers of life. Petechiæ, echymoses, general suffusion of the capillaries, coma, delirium, interrupted respiration, numbness and insusceptibility to the action of ordinary rubefacients, and sinking after evacuants, are much more common than in any other febrile disease.

and delirium may sometimes be so severe and protracted as to overwhelm or disguise the other symptoms."

Cause.—In France, this disease has been observed more frequently among the newly arrived recruits in the army. The officers were not attacked, but in Strasbourg, the sanitary officers had it. In Gibralter, the citizens were as liable to it as the soldiers, but the Jews escaped it. Those of every age and sex are liable to it, but those more robust and more exposed to it, are more liable to be attacked. Intemperance predisposes to it. Cold does not produce it, but favors its development. It appears at all seasons, but more frequently in winter. At Lille it appeared in the summer.

Some physicians maintain that it has a miasmatic origin, but that has not been proved to be true. It is generally supposed to be contagious, but Boudin does not think so.

This disease is very fatal in its tendency. According to Tourdes, sixty out of an hundred cases terminated fatally. According to Villar, there were forty-two deaths to the hundred. Broussais says the average mortality in fourteen epidemics was one case in seventy-six. In Bayonne it was as great as one in thirty-three.

Treatment.—No one has been able to discover a sure and safe remedy. Those who have tried venesection, leeching, cupping, calomel, mercurial ointment, and many other measures, gave them up and at last placed their main reliance on quinia and opium.

In regard to its treatment, Prof. Dolley says:-

"It was fully demonstrated that the depletory and other measures applicable to ordinary cases of brain fever, or cerebral inflammation, were pernicious; and that the first principal indication of cure was to support the sinking powers of life. Almost uniform success attended the judicious but vigorous use of diaphoretic stimulants and tonics internally, with rubefacients, artificial warmth, etc., externally. The particular remedies found most valuable it is unnecessary to mention in this connection. Many of them are such as are contra-indicated in inflammation of the brain and its membranes, "Everything which might tend to waste the vital powers should be avoided. Bleeding need not be mentioned but to warn against its fatal tendency. That a number of cases sunk from bleeding when the disease first appeared,

and was mistaken for inflammation of the brain, is universally notorious. In every severe case, free bleeding and free purging is almost certain death." (Dr. Miner.) Some were known to die while under the operation of a dose of calomel and jalap, in places where the disease made its first appearance. The lancet was found to be equally unsuccessful. (Dr. Page.) It seems not to have been contagious. The disease, at its breaking out, proved fatal in a very large proportion of cases, but after its nature and treatment became better understood, it does not appear to have destroyed more than one in fifty, and according to some statements, not above one in a hundred.

"This epidemic is well remembered by many now living in this region and has been vividly described by my venerable and worthy friend, Dr. McG., of this city, who treated many cases in N. H., and corroborates the foregoing statements. It is believed that "brain fever" of the present time, when fully understood, will be found to be essentially the same as this old epidemic, and if, unfortunately, it should continue, it will be found equally manageable by treatment based upon correct pathological views. necessity of physicians knowing what they do, and appreciating correctly and early such maladies, is apparent from the concluding words of Dr. Miner:-"Typhus-syncophalis, or spotted fever, when neglected or injudiciously managed, is among the most deadly maladies which a mysterious Providence permits to scourge the human race. When taken in season, and treated with decision and judgment, few diseases yield with so much certainty to a proper course of medication."

Tincture of gelseminum applied to the head, the forehead, and over the spine, has been found valuable to allay the inflammation and pain in those parts. Tonics and stimulants, even from the first, have proved useful; but a mild gentle expectant method, with sedatives and nervines, and such special agents as will remove complications as they arise, will save many patients that would sink under more heroic medication. It cannot be doubted that many eases have proved fatal in this disease where the fatal termination was greatly hastened by the injudicious course of treatment adopted.

STEARNES' CONTINUED SUTURE.

In the College Journal for December, there was published a cut of Stearnes' Interrupted Suture and an attempted description of that suture, which, however, was entirely erronious, and in regard to which the following note has been received by the inventor of the suture, Dr. I. H. Stearnes, of Washington, D. C. As the best mode of correcting the error, I now publish the note of Dr. Stearnes:—

"I regret that my description of the suture was lost, as you have entirely misunderstood the stitch. The suture you have decribed is old and well known. Enclosed are some samples, which may also be old, but I have not seen illustrated or described.

"In the engraving, the dotted lines represent the track of the



thread under the cuticle. The needle used should be curved at the point—not one of those semicircular abominations which nobody can use—and made to enter parallel with the wound at a suitable distance, transfixing enough to give the thread sufficient hold; the thread is then carried over to the opposite side, at right angles

with the incision over the skin, and the same stitch repeated, and so on, on alternate sides, until the closure is complete.

"This suture does not complicate the wound at all, as the stitches do not pass through but over it, on the outside. It is a most excellent suture for closing wounds of the intestines and other viscera where the serous surfaces must be brought together.

"For closing wounds about the lips or face, where it is very desireable that no scar may result, I believe it to be the best that can be used."

As here described there can be no doubt of the beautiful adaptedness of this new suture for closing all ordinary incised wounds, and particularly those of the face and scalp.

ANGINA PECTORIS.

BY C. H. CLEAVELAND, M. D.

EVER since this disease was first described by Dr. Herberden in his paper published in the *Transactions of the College af Physicians*, it has attracted the attention of all physicians who have for once seen a patient laboring under the deathly agony it produces.

A person in apparently perfect health may be attacked, usually on walking or other active exercise, taken soon after a meal,—with a seizure of an extremely painful and disagreeable sensation in the chest which is of a piercing or cutting character and appears as if it would almost instantly destroy life if it was to increase in intensity, or continue even for a short time. On ceasing from exertion the pain usually ceases or greatly diminishes in intensity. After the attack has been repeated, however, many times, the pain sometimes continues for hours after the cessation of active exercise.

The duration of the severe distress of the first attacks, or those that occur before the disease has become chronic, seldom exceeds more than a few minutes, but sometimes continues even an hour or more. The attacks are not repeated with any regularity but at first recur only after an interval of several weeks or even months; but as the disease becomes more confirmed they are repeated more and more frequently.

The seizure, in the more confirmed cases, may come on without the excitement of active exercise, even while the patient is in bed. But it may usually be traced to either physical or mental excitement.

The paroxysm has been known immediately to destroy life; and hence this disease is looked upon by both physician and patient with a great deal of anxiety, for, as subsequent attacks are frequently more severe than the first ones, the patient is liable to be carried away suddenly, or by a more gradual destruction of the vital powers. This is usually a disease of advanced life, although it attacks people of middle age, and even youth. It is much more common with men than with women.

In the history of the forty-five cases angina collected by Sir John Forbes in which the heart was examined after death, thirty-

nine were found to have an organic disease of either the heart or of the great vessels; but whether the disease of those organs caused the angina, or whether the angina caused the organic lesion, could not be determined.

In his recent work on "Diseases of the Heart," Prof. Flint affirms that angina pectoris is a neuropathic disease, and not connected essentially with any special or organic change in any of the structures of the heart.

It however is sometimes connected with, and symptomatic of organic lesions of that organ. It is a neuralgia of the heart, and whatever complications are connected with it, it should be so considered. It may be distinguished from pseudo-angina by a careful observance of the symptoms manifested;—by noticing that its attacks simulate the attacks of other neuralgic diseases, as hysteria, etc., and that in pseudo-angina there is less intensity of anguish, less fear of immediate death;—that the attacks are less acute, less abrupt in their appearance, and that they continue longer.

The *Treatment* of angina demands for immediate relief the use of sedatives combined with diffusible stimulants. Hoffmann's anodyne is an admirable remedy in these cases. So is the use of chloroform in such quantities as shall keep the patient constantly under the sedative influence of the vapor. Since the first discovery of chloroform, many physicians have relied on its application all attacks of angina. As yet, all the treatment adopted in angina pectoris, has been either directed to the prevention of attacks, or their palliation when they appear. The prevention consists in the careful avoidance of all exciting causes, and the preservation of the general health of the patient; while the palliative treatment is that detailed above.

Dr. Tanner has been accustomed to prescribe a mixture prepared as follows:—

R. Spiritus Ætheris Comp., f3ss. Liquorls Opii Sedatio, gtt. xx. Tinct. Casterei, gtt. xv. Aquæ Menth. Piper., f5jss.

M.

To be drank when demanded.

This medicine he recommends the patient to keep by him and to take whenever there is any indication of a repetition of an attack.

BOOKS AND PERIODICALS.

BY THE EDITOR.

During the past few weeks but few medical books have been published in this country; but the publishers of the various magazines have become convinced, apparently, that no class of articles are so popular or so eagerly read as those relating to hygiene or health.

Gerhard on the Chest, first published some twelve years since, now is reissued in its Fourth Edition revised and enlarged, by J. B. Lippincott & Co., of Philadelphia and transmitted through Applegate & Co., of this city. It has been thoroughly revised, carefully corrected, and enlarged by about one hundred pages of new matter, including additional remarks in regard to codliver oil, pneumonia, pulmonary consumption, and especially in regard to diseases of the heart which had not been thoroughly discussed in former editions. It is a good work.

Warrington's Obstetric Catechism with a new title page, has also been sent from J. B. Lippincott & Co., through the publishing house of Applegate & Co. Not having the work as issued by Barrington & Haswell several years since to compare it with, I cannot tell what change, if any, has been made in it.

As a book of questions for Dr. Warrington's Obstetric Institute it may have been useful; but the active practitioner and the student in medicine will find other and larger works on the obstetric art far more satisfactory than this catechism.

Emmon's Manual of Geology, a work designed for the use of Colleges and Academies, is published by Sower, Barnes & Co., of Philadelphia. It is a Text-Book, and not designed for a full elucidation of the subject but rather to present established facts and the radiments or first principles of the Science. It is beautifully and freely illustrated, and appears well calculated to fulfil its objects and ends.

Freligh's Homeopathic Materia Medica, published by C. T. H. Hurlburt, of New York; compiled from Hahnemann, Jahr, Boenninghausen, Hull, Teste, and Hempel, and from the Clinical Provings of Buckert, Herring, Vanderburgh, Barlow, and others,

is designed to give the physician and student, a clear, short statement of the alleged curative powers and uses of the more important remedies used by the Homeopathic practitioners, without burdening the mind with what the compiler calls the "Titanic and useless mass" of symptoms to be met with in larger Homeopathic works, "to the discouragement and confusion of minds moulded in accordance with the common formula of patience and judgment."

The work is interleaved with blank pages for convenience in recording the results of individual observation and experience, and is otherwise well gotten up.

Prof. Coventry's Criticism on Sir John Forbes' work; "Nature and Art in the Cure of Disease," and Jacob Begelow's "Rational Medicine,"—a paper read before the Medical Society of the County of Oneida, New York, and published in pamphlet form by that Society, contains some good ideas and is well deserving a careful perusal, but does not appear to be specially worthy the honor of publication.

Prof. Reamy's Introductory Lecture to the Students of the Cincinnati College of Medicine and Surgery, Nov. 1, 1859, and published by the class, like many Introductories, is so so.

Dr. Davis' paper, on the Effects of Pressure upon the Ulcerated Vertebræ, and in Morbus Coxarius, reprinted from the New York Journal of Medicine, is a fair contribution to Surgery and well worth preservation.

All the Year Round, Charles Dickens' paper, has quite a number of articles of interest to physicians. That on Hysteria and Devotion, is wonderfully provocative of deep and earnest reflection.

Dr. Ludlam's Address before the Illinois Homoeopathic Medical Association, on The Sources and Benefits of Professional Earnestness, seems designed more for the people than the profession.

EXTRACTING FOREIGN BODIES FROM THE EYELIDS.—Dr. Leon Renard, in a note to the editor of the Union Medicale, describes the following method of extracting small substances which have

become lodged in the groove formed by the reflection of the conjunctiva from the upper lid to the sclerotic, and which often cannot be seen, even when the lid is inverted. The lid being seized at its angles between the thumb and forefinger of each hand, is to be gently drawn forward and downward, as far as possible over the lower lid, and retained there for about a minute. On allowing the upper lid to return to its normal position, the flow of tears will carry off the foreign body, which will usually be found on the lower lid, or one of the lashes, or on the cheek. The writer states that he has often found this simple method of the greatest utility and convenience.

RHAMNUS ALATERNUS AS AN ISCHOGALACTIC.—The editor of the "Floriligio Medico di Roma" reports several cases of lying-in women, who, from different reasons, could not put their children to the breast, or had to cease nursing them, and used the infusion of the leaves of rhamnus alaternus for the purpose of stopping the secretion of milk. In all of them the secretion was quickly diminished, the turgid state of the breasts rapidly reduced, and the patients thus saved the trouble arising from this condition and the inflammation so often following it. He adds that he found it impossible to discover the least disturbance in the other secretions and excretions of the women to whom he had administered the remedy. He is therefore inclined to believe that the rhamnus alaternus exercises a specific action upon the mammary glands; and he proposes to apply this remedy also to other swellings of The rhamnus alaternus is an evergreen shrub these glands. which is cultivated in gardens as an ornament, and is known in Italy by the name of "Olivelle," on account of the configuration of its leaves. It is given in infusion, the dose being five to six leaves to two pints of boiling water.

THE OIL OF THE DUGONG.—The oil of the Dugong, a fish found abundantly in the sea, near Australia, has been mentioned as useful in those cases where cod-liver oil is usually prescribed.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

A, or a. Ana, of each. An abbreviation used in prescriptions to signify that the quantity named, of each ingredient, is to be used. As,

R. Chlorate of Potassa, White Sugar, aa grs. z.

meaning:-Take of chlorate of potassa and white sugar, equal

parts of each, ten grains.

AAVOORA. The seed of a palm tree growing in the West Indies and in Africa, in the centre of which is a nut about as large as a peach stone, the meat of which is very astringent and is much used as a remedy in diarrhoea and other diseases requiring that kind of medication.

ABANGA. The name of a fruit of the palm tree growing in the island of St. Thomas, and the seeds of which is there used in pectoral diseases, as coughs, asthma, etc. It is customary to eat three or four of the seeds at a time, three or four times a day.

ABAREMO-TEMO. The name of a tree of Brazil, a native of the mountainous regions. Its bark is bitter and astringent, and a decoction is often used as a wash for indolent or offensive ulcers.

ABBREVIATIONS. Many words and terms used in medicine and pharmacy are so long that it is useful and customary to abbreviate them, especially in writing prescriptions. They are somewhat liable to be misunderstood, and hence should be used with great care. This rule should always be observed:—

In abbreviating any word or term, so much of the word or term should be written that there can be no danger of its being mistaken for any other, always including one or more letters of

the syllable succeeding the one written in full.

ABEILLE MELIFIQUE. The French name for the Apis Melifica,

or Honey Bee.

ABELEMELUCH. Name of a tree which grows in the region of Mecca. Its seeds, which are oblong and of a bluish color, are

said to be powerfully cathartic.

ABELMOSCHUS ESCULENTUS. The okra of the West Indies and the Southern States; often used in the preparation of soup. It is mucillaginous and nutritious, and may be used as an aliment, or shielder. Its pods or leaves are used in the formation of poultices. The seed pods are the parts usually used, and they are also sometimes preserved in vinegar as pickles.

ABELMOSCHUS MOSCHATUS. An evergreen shrub which grows in Egypt and most tropical climates, and produces the seed known

as the Semen Abelmoschi. It is seldom used in medicine, but the Arabs add the seed to their coffee to flavor it.

ABHAL. A fruit grown in India, and reputed of value to increase or produce a flow of the menstrual fluid—an Emmenagentic agent. We are not informed as to the mode in which it is used.

Abies Balsamea. The American Silver Fir,—The Fir Balsam. The part used in medicine is the resinous exudation known as the Canada Turpentine, a fluid which is nearly transparent, of about the consistency of honey, of a strong balsamic odor, and a sweetish, not very positive taste. Canada Balsam is very useful in inflammation of mucous membrane, and the skin diseases. It is useful both internally and externally in scaly diseases of the skin—an Anti-squamatic; in gonorrhea and gleet used both locally and generally; in diseases of the lungs, especially as an ingredient in fluids for inhalation; in catarrhal affections; and in piles, and inflammations of the stomach and bowels. Internally the dose is from ten grains to half a drachm, three or four times a day. It can readily be made into pills by means of the carbonate or calcined magnesia. It may also be mixed with mucillage or the yolk of an egg to form an emulsion.

ABIES CANADENSIS. The part of this tree used in medicine is the Resin or Pitch, often erroniously called Hemlock Gum; and a volatile oil obtained by distillation of the leaves known as the

Oil of Hemlock.

The resin of hemlock is used in the same class of diseases, and in the same doses as the Balsam of Fir, but is less efficient. It is sometimes dissolved in alcohol and used in diseases of the bladder, particularly in inflammation of the mucous membrane of that viscus.

The oil obtained by distillation is very stimulating, and is used internally in cases of rheumatism, cholic, flatulency, and other derangements of the muscles. It is often applied as a lotion in lameness or soreness of the muscles or tendons. The dose of the oil is from five to ten drops. Externally, almost any quantity

may be used.

Abies Excelsa. Norway Pine. This tree furnishes what is known as Burgundy Pitch, an impure resin, useful in the same cases as the resin of the hemlock tree. It also furnishes *Thus* or *Abietes Resina*, or Frankincense of commerce, which is a nearly pure resinous exudation in the form of tears or drops. Burgundy pitch enters into the formation of several salves, plasters, and ointments.

ARIES LARIX. The Larch. This tree furnishes the Venice Turpentine, a semi-liquid resin, which is useful in the same diseases as the other resins; and the Gum Orenberg as it is called, an exudation of a gummy character entirely soluble in water, and which issues from the tree during combustion when the forest has taken fire. A peculiar saccharine matter known as Manna of Briançon also exudes from its limbs.

ABIES PICEA. Silver Pine. The "Strasburgh Turpentine" is a product of this tree. From these various resins is distilled the

Oil of Turpentine.

ABIETIC ÂCID. This name has been given by M. Baup, to an acid principle which he found in the resin of the pinus abies. Chaillot applied the same term to a resinous acid which he found in frankincense. It is prepared by digesting the resin first in weak and afterwards in strong alcohol, mixing the two liquids, and evaporating them; dissolve and evaporate again and again, until pure. It is most probably a mixture of pinic and sylvic acids.

ABIETINA. Sometimes called Abietin and Abietine. A substance found in Strasburgh turpentine.

ABIOTOS. Conium maculatum.

ABLUENTIA. A name formerly given to such agents as were

supposed to purify the blood.

Abortiva. A name given to an order of medicines, capable of producing abortion, or miscarriage in pregnant women. It is generally admitted by the profession, that there are no medicines which will produce abortion without endangering the life of the mother. And many have doubted if medicines can destroy the life of feetus and sever its connection with its mother without first producing a harmful impression upon the organism of the parent. Hence abortives find no place in the classification of modern Materia Medica.

ABRATHAN. An improper abbreviation of the word abrotanum, and applied to the shrub Artamesia abrotanum, or Southern wood.

Abbette. An old name for Hibiscus abelmoscus, a plant whose fruit has the flavor of musk.

ABRICOT. Apricot. Prunus Armeniaca.

Abroma. A tree of New South Wales, which yields a gum.

ABROTANUM. Southern Wood.

Abbotonites. A wine prepared by impregnating it with the dried leaves of the Southern wood or Artemesia, mentioned by Dioscorides and other ancient writers.

ABBUS PRECATORIUS. Liquorice Bush. A small shrub of the tropics. The leaves and root are sweet,—and hence the name. The seeds are purgative.

Absinthmes. Abrotonites. Wine medicated by impregnation

of the leaves of Absinthium, or wormwood.

Absinthium. Wormwood. The leaves and top are the parts used in medicine. They should be gathered while the plant is in blossom. It is a powerful tonic, and renders the flesh and milk of animals fed on it quite bitter. It has been supposed to possess Anthelmintic properties, and hence its popular name, but at present it is supposed to prove serviceable in cases of intestinal worms by rendering the contents of the alimentary canal less liable to undergo putrefaction, and by strengthening the whole It is often applied in substance or in Infusion or Tincture, locally, to prevent putrefaction or change in the fluids and solids of a part that has been hurt or bruised; and for the same reason may be applied to the bowels or uterus by injections, in diseases of those organs. An oil is distilled from the herb known as the Oil of Wormwood, which possesses the properties of the herb in an eminent degree.

Absinthic acid. An acid discovered by Braconnot, in worm-

wood. It is said to be identical with succinic acid.

Absinthine. A substance obtained by Caventou by precipitation with the acetate of lead from the infusion of wormwood. It is an imperfectly crystalline substance, intensely bitter, and supposed to contain the active principle of absinthium in a nearly

isolated state.

Mein stated that he had obtained Absinthine in white crystals. Rhigini also obtained it. Dr. E. Luck, in 1851, published the method pursued by him, which was,—to make a tincture from the dried herb by means of alcohol of the specific gravity of 0.863, and distilling off the alcohol until the liquid was of the consistency of syrup, when the residue was put in a bottle and well shaken with ether until the ether had taken up all the bitter principle. The etherial liquid is distilled in a water-bath, and the absinthine is left in the residue mixed with an acid resin. The resin is washed away by means of water to which a little ammonia has been added, and the absinthine is left behind. It has not yet been much used in the practice of medicine, but has been recommended in dyspepsia, and as a substitute for quinia.

Absolute Alcohol. Alcohol entirely free from water, of a

specific gravity of not higher than 0.796. See Alcohol.

ABSUS. The Egyptian Lotus. A kind of cassia, the seeds of which, pulverized and mixed with sugar are applied to the eyes, for the cure of Egyptian ophthalmia.

Abuta. Pareira brava.

ACACIA. Gum Arabic. The concrete juice of Acacia vera and other species of the Acaciæ, and particularly the Acacia Arabica; hence its common name. It is obtained in considerable quantities from the Acacia Karro of the southern part of Africa, the

Acacia Senegal, growing in the hottest part of Africa, the Acacia gummifera of Morocco, the Acacia Ehrenbergiana of the deserts of Lybia, Nubia and Dongola; the Acacia Segal of Upper Egypt, the Acacia Adansonir, and many other trees, even those

not belonging to the same genus.

In medicine the principle use of Acacia, or Gum Arabic, is to serve as a Shielder, or Protector for inflamed mucous surfaces. It dissolves readily in water and blends with and dilutes matters which are irritating or acrid. It is hence useful in all forms of irritations or inflammations of the mouth, fauces, throat, stomach, and perhaps, of the intestines.

As an aliment, or article of diet in fevers and inflammatory diseases, it has been considered superior to most substances. In pharmacy it is used in making pills, trochees, mixtures, confections,

and syrups.

ACAJON. The Anacardium Occidentale.

ACALYPHA VIRGINICA. A plant said to possess the power of increasing the secretion of the kidneys and the lungs:—Uragentic and Expectorant properties.

ACANTHUS MOLLIS. The bear's-breech. A plant whose leaves and root abound in mucillage, and are used the same as Althea, as a Protector and softener of the parts to which it is applied.

ACAPNON. An old term used to indicate honey which had not been *smoked*, as was often the case in destroying bees. Also used to designate the Wild Marjoram.

ACAPATIA. Piper longum; long pepper.

Acaeicoba. A Brazillian plant, said to be Aromatic and Emetic.

ACAROIS RESINIFERA. The tree which yields what is sold under

the name of Botany Bay resin, or Gum Acaroides.

Acaromes resina. The resin from which is prepared the *Tincture of New Holland Resin*, which was recommended by Prof. Mitchell of New York, and many of the profession in New

England.

Kite says: It is of great value in dyspepsia; in debility consequent upon depletion, or the exhaustion following acute diseases; in hysteria, and other diseases of the organs of reproduction; cholera with cramps; diarrhœa, dysentery, and other derangements of the alimentary canal; in catarrh, and in spasmodic affections. It is said to be of too stimulating a character to allow of its use during the presence of a febrile or inflammatory state of the system.

ACATSJAVALLI. A Malabar plant, which possesses Aromatic and Astringent properties. A bath of an infusion of it has been used in Brazil, for the cure of hemicrania, but its exact effect in

those cases is not known.

ACER CAMPESTRE. The common Maple.

ACER PSEUDOPLANTANUS. The Sycacmore Maple tree. It is also known as the *Plantanus traga*. The juice or sap of this tree has been used in England as an Antiscorbutic. The dose is not limited.

ACER SACCHARINUM. The Sugar Maple. This tree yields a sap or juice from which a sugar is made, identical with what the chemists know as cane sugar.

ACERATES LONGIFOLIA. The long-leaved Milk-weed. One of the Asclepiadaceæ, and pessessing the medicinal properties of that

order of plants. It is seldom used.

ACEEB. A taste, or flavor, a compound of bitterness and astringency. Often found in unripe fruit.

Accesso Acro. A peculiar acid found in juice the of the com-

mon maple, or the Acer Campestre of Linnæus.

ACETAL. Sometimes called oxygen ether, discovered by Dobeireiner. Liebig considers it a combination of aldehyde and oxide of ethule.

ACESTIX. Borax. The biborate of soda.

ACETARIA. A pickle or salad prepared with vinegar.

ACETA. Vinegars. Those preparations where the active principles of medicines are held in solution by vinegar are known by this title.

Vinegar is an admirable solvent of the organic alkalies and alkaloids, which it converts into acetates. This combination modifies somewhat the properties of many medicines, but not so much as injuriously to interfere with their therapeutical power. As common vinegar contains some impurities which render it liable to undergo decomposition, it should never be used as a solvent or in the preparation of Aceta until after it has been distilled. Even when carefully distilled, solutions in vinegar are still liable to undergo decomposition. Hence, dilute acetic acid is preferable as a menstruum.

Acetas. An acetate.

ACETATE. A salt formed by the union of acetic acid with an alkaline, earthy, or a metallic base. The acetates may usually be readily determined, by applying sulphuric acid to the salt under examination, when the odor of acetic acid or vinegar will be quite apparent.

ACETATE OF ALLUMINA. This has been used both for its Astringent and Anti-putrefactive properties. It may be used locally in

solution in water, of the required strength.

[To BE CONTINUED.]

At his residence in Cincinnati, on Friday 27th January, 1860, Dr. WILLIAM PRICE in the 72d year of his age.

Dr. William Price was born in Chester Co., Penn., on the 17th September, 1788. His parents were Quakers, and as he was reared on a farm his early opportunities for an education were limited to a County School which was located on the spot where the British had their hospital at the time of the battle of Brandewine, which battle was fought in sight of what afterwards became the home of the Prices when they removed to the banks of the Brandewine, during the infancy of William.

Dr. Price's parents were possessed of more than the usual amount of intelligence, and their children were encouraged in their efforts at mental improvement. As this son had a distaste for farming he taught school from the time he was sixteen years of age until he was nineteen, to obtain means to enable him to study medicine. At about the age of nineteen, in 1807, he entered the office of Dr. Joseph Parrish of Philadelphia, and attended lectures at the University of Pennsylvania until 1811, when he graduated, and soon after sailed to China in one of Thomas P. Cope's vessels. On his return he was appointed one of the Resident Physicians of the Pennsylvania Hospital. He sailed again to China in 1814, and on his return thence in 1816 he went to Europe to pursue the study of medicine. He attended lectures at the best schools of London and Paris until 1819. London he was an inmate of the family of Dr. Abernethy.

In 1820 Dr. Price married Hannah Fisher of Philadelphia. In 1822 he again returned to England, and resided in Liverpool until 1825. On his return to America he went with Robert Owen to New Harmony, Ind., where he remained six months; and from there he removed to Cincinnati in 1826, where he resided almost uninterruptedly until his death.

In his long, and somewhat eventful career, Dr. Price became acquainted with many of the most eminent persons of his time; and his talents, his urbanity, and particularly his wonderful kindness and purity of heart and remarkable self-abnegation, rendered all his acquaintances warm and abiding friends. In his professional intercourse, he was beloved by all who knew him, and his death will be mourned by many whose sufferings have been alleviated by his skill and his labors, who will feel it difficult, if not impossible, to transfer their regard and confidence to another.

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GENERAL PATHOLOGY.

BY THE EDITOR.

Within the past ten years the opinions entertained by the profession in regard to many points in the science of medicine, have undergone a change amounting to an almost entire revolution; and in no department of the science have these changes been more marked or productive of a greater modification in the treatment of disease, than in the doctrines in regard to pathology.

While the special pathology of many individual diseases and classes of diseases have received the most critical and cautious and repeated examinations of the most laborious and astute in the profession, the *general* pathological views of the profession have undergone a change fully equal in amount and importance to the changes in respect to special diseases.

The exclusive "Humoralism," and "Solidism," of former times have nearly passed away, and even the modern Neuropathological notions are giving place to more rational and consistent views of the primary changes produced by disease,—views which perhaps have been developed by the progress of histological science which has resulted in the establishment of cell formation as the primal formation of all vitalized or organized growth.

All scientists at the present time appear to be united in the opinion that all animals as well as all plants are developed from cells,—that all the organs and tissues of the human body originate in cells, and are strictly cellular in their construction, even after the cells lose somewhat of their original conformation and assume the conditions and relations which constitute them tissues.

The older pathologists, or those who wrote before the cellular histology of plants and animals was established, could clearly

perceive that changes—pathological changes, could and did occur in the more solid parts of the organism; and supposing those to be all the changes that occurred in disease, or at least that the changes of the solids were the *cause* of those in the fluids, became advocates of the exclusive dogmas of Solidism.

Other observers perceived that diseased manifestations were produced by the addition of deleterious agents to the fluids of the system, or from the absence of some element whose presence was necessary to the normal constitution of those fluids; and that these departures from the natural conditions of the fluids produced derangements and diseases, which finally, in many instances, involved the solids also,—supposed that all the changes of disease originated in the fluids, and hence became ardent advocates of Humoralism.

Another class of teachers, and those of a speculative cast of mind, rather than those engaged in the practice of the profession, were men who may be called *Neuro-pathologists*. They perceived that many organs and tissues are acted on by the mind and by medicines through the medium of the nerves distributed to those parts; and they contend that all impressions are received through the medium of the nerves.

But it should never be forgotten, that besides the solids, the blood, and the nerves, and nerve-centres, there are many other things in the animal economy; and that those other parts are not mere dead matters designed simply to receive impressions from parts developed into organs, or impressions conveyed to them through the nerves.

The cells of the tissues, the organs, the muscles, and the glands, possess an individual character, and in a certain sense an individual life, as much as any of the organs possess an individual character or an individual vitality; and this fact has been recognized by Wells, by Peaselee, Donders, Virchow, and others.

Peaselee says that fatty degeneration is the most common change in cell-contents, and that this fatty degeneration may pass into pigmentary degeneration. Wells says that dropsy-cells will occur if there is too much water in the blood;—and that atrophy may occur if there is too little water in that fluid. There can be no doubt entertained that the solids and the fluids, and

the nerves, have each much to do in becoming diseased, and producing diseased action; but that either of them, or even all together, are the only originating points or cause of disease, will be quite difficult and I think impossible to prove while it is admitted that the cells have as much individuality as have the nervous or the vascular systems. The cells of the glands are acted upon directly by various medicines as the cells of the muscles are acted upon by Astringents and Relaxants: and the inference is entirely logical that morbific agents can and do act directly on those cells as well as remedial agents can and do.

The admission that the individual cells are endowed with an individual vitality and an individual function, is equivalent to the admission that such vitality and function may become deranged, or in other words diseased; and as the blood as a whole, or the nerves as a whole, or any of the various organs as a whole, may become deranged in function or in structure, so any individual cell may become diseased in function or in structure, or any group of cells may become so diseased—may be changed chemically, morphologically, or functionally, without there having necessarily been any previous disease of either the blood or the nerves. Cancer, and most if not all forms of the so-called malignant diseases are diseases of the cells, which frequently at first are the only parts suffering from the disease.

But there is a something in the human organism beside cells,—the sometimes so-called inter-cellular substance, abounding in cartillaginous, mucous, and connective tissues, and surrounding the cells, which appear as if they were imbedded in this surrounding substance or connective tissue, from which are developed the areolar tissue, mucous tissue, adipose tissue, and bone. Most diseases of the bones, as rachitis, fragilitis ossium, etc., as well as dental caries, are illustrations of disease originating in the connective tissue. Many forms of disease of the kidneys are also instances of disease of the same tissue. These and other pathological conditions originating in the connective tissue will be mentioned when treating of individual diseases.

In order to understand clearly pathological conditions it is necessary to be acquainted with physiology and histology; and any pathological hypotheses not founded on them must be erroni-

ous; and as most of the hypotheses regarding pathology which obtained in former times must have been formed without very correct notions in regard to histology, it is quite apparent that they must have been but partially correct; and it is no more presumptive to claim advancement in our knowledge of the pathology of the human system than it is to claim advancement in our knowledge in regard to its physiology.

Cellular pathology is based on the same evidence that proves that organs, as unities, are subject to disease. Humoral pathology is based on the assumed unity and independence of the fluids as a whole. Neuro-pathology is based on the assumption that vitality cannot exist and therefore cannot be diseased except as it is caused, controlled, and governed by nerves;—that all exciting or irritating impressions operate directly on the nerves, and only through the nerves upon other parts of the organism.

It has been repeatedly proved that every part or element of the system can be acted on without the mediation of the nervous system, and on this fact is based all the deductions of Headland in his Prize Essay on the Action of Medicine-deductions admitted to be correct by almost the entire profession. The whole philosophy of therapeutics is based on the fact that some medicines act on certain organisms without exerting any perceptible impressions on other portions of the organism,—that all medicines have special relations; and the capability of being impressed by agents does not belong to the nerves alone, but to other organs, and to the cells of those organs;—that inasmuch as nutrition follows from the fact that elementary parts of organs possess the power of taking to themselves such portions of aliments as are required for their nourishment and growth, that many forms of disease must originate from mal-assimilation, or imperfect nutrition, also originating in the same ultimate portions of organs.

In regard to pathological, as well as in regard to nutritive changes, it is quite impossible to contest the fact that each cell as well as the connective or intercellular substance, is liable to be primarily affected, and not secondarily either through either the blood or the nerves. No one will attempt to prove that many diseased changes are necessarily connected with either nervous or

vascular influence; and unless the fact is clearly admitted that some changes do occur without being thus produced, but little progress can be made towards arriving at the most plain and simple explainations of many important pathological phenomena, connected with both *Fevers* and *Inflammations*.

THE PHYSIOLOGY AND PATHOLOGY OF THE MOUTH. THE GLANDS AND THEIR SECRETIONS.

BY C. H. CLEAVELAND, M. D.

The glands within and about the mouth are very numerous, and the amount of fluid which they pour out into that cavity is very great—far more than passes into the blood from food or drink, rapid as is endosmotic absorption in this part of the system; and hence a considerable quantity passes down the throat both with our food and at other times. The amount of fluid poured into the mouth by the glands more than is re-absorbed in the mouth has been estimated by Bidder and Schmidt, of Derpt, as detailed in their great work *On the Digestive Juices*, at from three to four pounds, avoirdupois, of saliva in the twenty-four hours.

The quantity of saliva poured out varies greatly in amount at different times and under different circumstances. Not only is its quantity changed in accordance with the nature of the food eaten, but also in accordance with the mental impressions. Very little is secreted during sleep, but the thought of food will frequently fill the mouth to overflowing almost instantly. Dentists are well aware that if they can get the attention of their patients they can sometimes perform operations with but little interruption from the saliva, but when once it commences to flow it will do so abundantly for a considerable length of time.

As has been intimated, the nature of the food has considerable influence upon the quantity of saliva secreted; hard, dry foods leading to a much greater flow than is caused by those which are soft and moist. There are several articles which are used as condiments or seasoning, with food, which also appear to be direct stimulants to the glands that secrete saliva and water into the mouth. It is well known that black, but more especially

red pepper, produces this effect in a marked degree. So also, probably does salt, and it also causes free exosmosis of the fluid portion of the blood out through the buccal mucous membrane. The movement of the jaws likewise, as in speaking or chewing, increases the amount of this secretion; and frequently hunters and others who are suffering some inconvenience from thirst, chew a piece of stick or a small coin in order that its mechanical impressions and the movement of the jaws and the muscles it causes, may lead to an increase of the moisture within the mouth. The usual manipulations of the dentist have been observed to increase the flow of these fluids at least to ten-fold their ordinary amount, but the excitement continues only a short period of time.

The salivary glands are not the only glands whose secretions are poured into the buccal cavity. The entire mucous lining of the mouth may be considered have secreting glandular surface, for all secreting glands are but, as it were, an enfoldment of a secreting surface crampled up into a small compass, as a sheet of paper may be enfolded and crumpled up in the hand so as to be

made to assume a globular form.

In the remarks that have been made respecting the *Epithelium*, it has been considered simply as a covering to the mucous membrane. So also in regard to *osmosis*, the blood-vessels and their contents were mainly considered, and with reference, principally, to the osmotic flow of fluids into the blood-vessels from that taken into the mouth as food or drink. It is proper now to consider the mucous membrane with reference to its peculiar secretion.

The word *Mucus* conveys to the reader, generally, but a vague idea. It is a vague term. We are led, usually, to suppose that a technical term of Latin origin has a distinct and definite meaning; but no very definite meaning is usually attached to this word. Perhaps the word *slime* would have been preferable as that would imply only the one quality of a glassy, semi-jelly-like fluid, easily drawn into strings or threads, powerfully coherent, and very tenacious in its attachment to any surface it is in contact with.

The chemist cannot tell us whether pure mucus is acid or otherwise,—or whether the soda often found with it is a necessary

part of it, and it is therefore alkaline. The microscopist describes some variously shaped bodies he observes through his lenses and calls them "mucus globules," but these bodies occur in greatly varying proportionate quantities, sometimes one form or size constituting the greater proportion of the solid matter within the fluid we call mucus, and sometimes another form or size being in similar excess, and yet apparently having but a little if any influence on the nature of the fluid.

It is quite evident, however, that some of these bodies observed through the microscope are detached epithelial scales, only differing from each other in accordance to the usual variation in form to be found in epithelial scales from different portions of the mucous membrane. Other of the so-called "mucus globules" appear to be simply epithelial scales not fully perfected before they have become detached—youthful epithelial scales—such as are always to be seen in the deeper parts of the mucous membrane, being nearly round balls or beads of jelly with one jelly bead for a center or nucleus which is quite large and with distinct outlines, and that surrounded with several other similar bodies. These two forms of bodies—the apparently dead old epithelial scales and the youthful ones—are so constantly present in mucus and in such large quantities, as to be supposed by some to be the mucus; and the water present is considered simply as water in which the mucus is suspended, or which the mucus has absorbed.

The slightest irritation, even of a strictly healthy character, increases vastly, not only the amount of water in the mouth, but also of the salts that water holds in solution, as well of the other matters in the water. Many have supposed that the epithelial scales were the mucus, and that they absorbed the water as tragacanth does, and thus became the glassy, jelly-like semi-solid, known by that name; while others supposed the fluid was mucus before the epithelial scales were combined with it, and that they should be considered as accidental or at least foreign bodies, and not a part of the mucus, per se. Dr. Tilanus, Profs. Rokitanski, Virchow, and other eminent physiologists, have inclined to the opinion that the peculiar characteristics of mucus, or that which makes it mucus, is the old and the young epithelial scales and globules become detached and filled to saturation with water.

fully established the fact that had come to be doubted by some. This conversion of starch into sugar appears to commence instantaneously on the union of saliva and a decoction of starch, whether the mixture takes place in the mouth or in a glass vessel, and hence is purely chemical change. The pancreatic and intestinal juices possess this power of conversion also in common with the saliva; unboiled or raw starch is not thus changed.

Neither the secretions of the parotid glands, the sub-maxillary and sublinguial glands, or the buccal mucous membrane when taken separately, possess this power of converting starch into sugar, and only an admixture of them will produce a change—or at least an admixture of the buccal mucus with fluid from the sub-maxillary glands. The parotid fluid seems to be simply water. When the saliva is considerably acid, as from disease, the starch is not changed into sugar as quickly, and yet it is changed after a time.

The present state of our knowledge in regard to changes produced by the saliva on the food indicates that boiled or cooked starchy food is in part at least changed by the saliva into sugar; that a part of this sugar may be at once absorbed from the mouth into the system, and a larger portion passes into the stomach, there to be changed into lactic acid. The other part of the starch, not changed into sugar in the mouth, may be so changed by contact with the pancreatic and intestinal juices, for they possess the same power as the saliva.

The saliva is not known to produce any other metamorphosis than that of changing starch in sugar; but it does *retard* the digestion of meats, and animal food or albumen; and hence such foods are not usually retained long in the mouth, or much mixed with saliva. Quite young infants do not secrete any saliva.

As saliva has for its source many parts of the month, an injury to any one part of it is not likely to seriously modify its amount. These glands also have great power of accommodating themselves to quite considerable changes of circumstances, and hence it is that the disgusting habit of spitting indulged in by some, does not appear to produce serious suffering to those who do not expectorate as gentlemen, however much others may be made to suffer by it. Others do suffer from a loss of appetite and a feel-

ing of distress at the epigastrium. Those who use tobacco, doubtless suffer less from the loss of saliva than they would from swallowing the poisonous juice of the weed.

When the tongue, lips, and mucous membrane become dry and parched, and the teeth covered with a thick sordes,—as in some forms of fever, starchy food is highly improper; for then there is not enough saliva secreted to change the starch into sugar, and it therefore can not be changed into a soluble substance to be absorbed into the system. Then, beef-tea, broths, and soups, will be beneficial, and almost always agreeable to the palate.

FEVER.

BY C. H. CLEAVELAND. M. D.

Although the word fever has been in use by all writers on medicine for many centuries, and although the phenomena known collectively by that name, are among the most common brought to the notice of the profession, yet there seems to have never been any clear, distinct, and generally admitted views of what pathological conditions or states are to be understood as represented by the word used.

Without occupying space in criticising the definitions of others, which, however, have mainly consisted in an enumeration of symptoms without any reference to the cause or causes of those symptoms, I will at once attempt to define the term as used by me.

Fever is primarily a disease of the fluids of the system, from some change in them which causes the chemical forces to preponderate for the time over the vital forces and produce a tendency to putrefaction, or decomposition of those fluids into their ultimate elements. This disease is usually mainly of the corpuscles of the blood.

As each artery is accompanied by a branch or branches of the great splanchnic nerve, and the lining membrane of each artery is supplied with branches and ramifications of this nerve in innumerable multitudes, and as these nerves have thence been called the moderator nerves,—the nerves that preside over the functions of

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tion of all or nearly all organizations, namely,—of excreting or throwing off effete and hurtful materials. As the plasma of the blood surrounds the corpuseles, it must receive the effete matter of the corpuscles; and as the corpuscles, like other organs and tissues are usually more rapidly changed when diseased than while in health, the entire amount of the blood may be deteriorated when the corpuscles suffer from disease.

Those who have not understood this matter, or have failed to perceive the value of correct physiological views as a basis for the treatment of disease, need to be reminded, that;—The corpuscles of the blood are each an independant organism,—that the plasma in which they swim is distinct in its nature, structure, functions, and vitality, from the corpuscles,—that the corpuscles derive from the plasma and from the atmosphere the materials necessary for their growth and continuance as vitalized organs as well all hurtful materials, and that they discharge into the plasma and the atmosphere all their excretions and effete materials.

The plasma of the blood comes in contact with various depurating or excretory organs in various parts of the system, which separate from it such matters, as if left to remain in it, must render its composition and qualities unfitted for its normal functions. The plasma is each moment undergoing changes, produced by the reception of articles through the stomach as foods or drinks, or by the removal of matters through various emunctories.

As the plasma does not seem to have any fixed nature, changes in its condition to a considerable extent, can occur without any diseased manifestation. But such is not the fact in regard to the corpuscles; as any material change in *their* condition, is quite sure to produce symptoms of disease, which symptoms are those usually denominated *febrile*.

Hence fever, or the symptoms represented by that word, whatever be its peculiar form or variety, is produced by a derangement of the blood but more particularly of the corpuscles of the blood, tending to death and putrefaction.

When the venous blood does not excrete its carbonic acid readily, it produces pain and distress in the head almost immediately, but *febrile* symptoms cannot be said to be developed; but when noxious gasses, or the femities of infectious diseases are

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breathed into the lungs, or absorbed through the skin so as to come directly in contact with and to injure the corpuscles and depress their vitality, as soon as *their* condition is materially changed thereby, will the symptoms of fever present themselves, and *Fever* be developed. As the disorder spreads from one corpuscle to another and more are involved, more intense will be the febrile symptoms, until the disease will have either destroyed the patient, or exhausted the compounds to whose changes it owes its existence.

The presence of an unusual amount of many deleterious agents in the blood, so long as they do not induce changes in the corpuscles, do not cause symptoms of fever. Gout and many other forms of disease originating in an altered state of the blood are illustration of the fact. Yet when these blood diseases have progressed so far that the solids of any organ become diseased and take on the putrefactive tendency, then the symptoms of inflammation are manifested; for:—Inflammation is a disease of the solids and plasma of the blood, in many regards like the disease of the fluids which we call fever. Or if the corpuscles of the blood may be called floating solid bodies:—Fever is a disease of the floating solids, with a putrefactive tendency; and Inflammation is a disease of the stationary solids with a tendency toward putrefaction.

As the blood circulates throughout the whole system and diseased corpuscles pass the round of the circulation, fevers are general in their manifestations. As the solids are localized in their structure and uses, inflammations are always of a local character.

Air comes almost directly in contact with the corpuscles of the blood, and through the air the virus of the contagious fevers, as well as some other forms of fever, is conveyed to the corpuscles and produces disease in them. As long as the disease is confined to the corpuscles alone, fever will be produced, but not inflammation, as the corpuscles cannot pass through the coats of the vessels to come in contact with the solids.

But when the plasma of the blood becomes diseased; through errors of diet, the introduction of poison into the system, or from the influence of diseased corpuscles, inflammation may be produced. For the plasma passes through the walls of the capillaries and thus comes directly in contact with the solids of the

tissues which it impresses, producing disease of the solids; or inflammation. Many forms of fever produce inflammation in this way. Inflammation by producing a change in the plasma in contact with the inflamed structure, and thence in the corpuscles, may cause fever. But much more frequently is inflammation produced by a primary fever, than is fever produced by a primary inflammation.

When treating of Inflammation I shall have occasion to refer to this matter again, and perhaps make my ideas more distinct and more easily understood.

URÆMIA.

BY T. C. MILLER, M. D.

The word uramia is used to indicate the poisoning of the blood by materials being retained in that fluid which should pass off as urine. In uramia, the materials which constitute the urine, are in part or wholly retained in the blood from some defect in the kidneys which prevents those materials from being strained off; or some defect in the nerves that control the kidneys.

As the materials of the urine are not eliminated through the kidneys, they pass out through the skin, the lungs, or the intestines, giving the smell of urine to the excretions of those organs. Sometimes as the secretion of the skin evaporates, the saline matters that should have been excreted through the kidneys, by evaporation take the form of crystals that are quite distinct upon parts of the body. The blood, from these matters being retained in it, becomes more fluid than usual and of a cherry brown color.

Quite often in that form of disease of the kidneys known as Bright's disease, there are a series of symptoms produced by the disorder of the blood caused by the retention of excrementitions matters that cannot be strained off by the diseased kidneys. There are disturbances of the central nervous organs, as the brain or spinal marrow, which disturbances give rise to the symptoms of the disease uræmia.

The acute form of ursemia presents itself without any noticeable premonitory symptoms. The disturbance commences with

a derangement of the functions of the brain and spinal marrow, and derangements of the organs of elimination. When the brain is the organ chiefly affected, there is a loss of appetite, hoarseness, debility, vertigo, nausea, vomiting, sometimes chills and fever, disturbed sleep, dreams, fear, and perhaps delirium; with a condition as if the patient had been stunned, from which he can seldom be aroused.

The face is pale, the pupils of the eyes are unchanged, the eyelids become glued together, the pulse ranges from sixty to ninety beats in the minute, and the respiration is stertorous.

When the spinal cord is the part chiefly afflicted, convulsions occur quite early and suddenly, having the characteristics of puerperal convulsions, or the convulsions of epilepsy.

These two forms of uræmia, the comatose and convulsive,—or the two combined, occur quite often from a sudden suppression of the excretion of urea, and particularly caused by morbus Brightii, after scarlet fever, typhus or other forms of disease, producing a rapid metamorphosis of tissue with the formation of considerable carbonate of ammonia.

In these latter cases, the prognosis is somewhat more favorable than when the uræmic disturbance is caused by an organic disease of the kidneys, yet even this form of the disease may prove fatal in a few days—and perhaps hours. In uræmia produced by Bright's disease, the disease is often sudden in its invasion. Not seldom do the other symptoms present themselves even before there are noticed any changes in the condition or appearance of the urine.

When the sudden appearance of the convulsions is produced by matters gradually accumulated in the blood, and carbonate of ammonia is formed in the blood by the decomposition of nitrogenous material, then the most immediately tatal termination to the disease may be apprehended.

The chronic form of uramia manifists itself by slow and almost imperceptible progress, which for a long time may have remained without attracting special notice; and yet is likely to prove fatal. Mental sluggishness, a dull head-ache, a feeling of wildness in the head, weakness of the eyes, expressionless countenance, sluggishness, listlessness, indigestion, an odor of urine in the breath

and in the perspiration, a tendency to diarrhea, a swelling of the eyelids, ascites with exanthematous cruptions on the skin. These symptoms are nearly all observed in Bright's disease of the kidneys, and diminish and finally disappear as the disease of the kidneys is cured. In cases where the original cause is not cured, the symptoms become aggravated and increased in intensity, the patient falls into a comatose condition, with stertorous breathing, and rattling at the throat, and death.

The Diagnosis of uramia is not always easy or certain; errors are excusable in some of the forms of the disease, because the patient may have kidneys far advanced in degeneration without any striking symptoms being manifested. The patient continues his usual avocations until a decomposition or an alteration of the blood occurs, which suddenly induces a changed condition of the urine and the kidneys, so that the ducts are liable to be filled with exudations so as to hinder or prevent the excretion of the urine and cause it to be retained in the circulating fluids. In the later stages of scarlatina, after typhus, as a sequelæ of cholera, during pregnancy, and after parturition—the kidneys are quite liable to become so affected that the urine is not freely excreted, and uramic convulsions and ecclampsia will present themselves.

Besides diseases inducing a change in the condition of the blood and thus causing derangements of the organism of the kidneys as in the cases enumerated, the nerves of the system are directly disturbed by the urea in the blood; and, hence uramia not unfrequently causes deafness, amaurosis, or derangements of other of the nerves of the special senses.

In disturbances caused by a uræmic condition of the blood, before the more dangerous symptoms manifest themselves there may be observed a diminution of the quantity of urine voided. Perhaps the urine is bloody and turbid, with an increase of albumen in it. But there are instances when the urine appeared of a normal constitution and increased in quantity, even until near the point of death.

In the earlier stages of this disease a very common symtom is vomiting,—at first of a sour fluid, and later, of a fluid of a ammonio-potassa, or urinous smell. As the uræmic condition passes away, the amount of urine voided is usually much increased.

This is so uniformly the case that an increase in the quantity of urine has been looked upon as a critical symptom.

In the *Treatment* of ursemia there are three points to be considered. First. The restoration of the normal secretion of the urine, both in quality and quanity. This requires the milder diuretic salts, with perhaps bitartrate of potassa. The more irritating and stimulating diuretics are here very dangerous. One of the most certain agents to restore the urine when suppressed after scarlet fever, is the tartrate of soda, prepared by making a solution of bicarbonate of soda in water, and enough of tartaric acid to neutralize the alkali; and as much of this solution as the stomach can dispose of may be given.

Secondly. The decomposition of the blood or the solids that cause the excessive nitrogenous or ammoniacal condition of the blood, the aræmic condition of the blood, must be counteracted. For this, acids, and particularly phosphoric and sulphuric acids are of great value. They can best be given in solution. The aromatic sulphuric acid, or elixir vitriol of the older writers, is a very good form in which to give sulphuric acid. Acids may well preceed diuretics in the treatment of uræmia.

Thirdly. The destructive effects of the ammonia developed in the blood, upon the kidneys, the blood, the tissues, and especially upon the nerves, must be counteracted, and the injuries it has caused must be repaired. For this purpose the acids already named will be found useful. So also, will chlorine. Vinegar, applied to the surface, and the cold water douche, and other measures to rouse the skin to activity will be needed. The peculiar condition of the nervous system will demand a proper use of appropriate neurotic medicines. The treatment will require to be continued for a considerable period of time. Each peculiar form of the disease will demand its appropriate remedy.

Diet. The diet should be such as is easy of digestion, and mostly of vegetables; as animal food would supply nitrogen to the blood, out of which the peculiar body may be made that causes the disease. Too little attention is paid to the nature of the diet in this form of disease.

DIPHTHERIA.

BY J. M. WARD, M. D.

During last year the above name inflammation occured in this vicinity, and proved quite fatal in the hands of some physicians. I have not found the treatment adopted by me named in any work on the subject, and as it may be of benefit to others I will state it. I treated several cases and did not loose one; and I was called in consultation in two other cases that had been given up, and where, in one of them the inflammation had extended to the trachea with symptoms of croup, and both recovered. The physician in attendance had lost every case of the kind he met.

His treatment was with calomel and tartar-emetic. Mine was a gargle of the solution of chloride of soda diluted, and chlorate of potassa with quinia internally, rubefacient liniments to throat, followed by sinapised poultices:—oil and turpentine as a laxative and ipecacuanha and lobelia as an emetic, used as occasion required. I also used the warm bath with children. The chlorine mixture mentioned by Watson would probably answer in place of chlorate of potassa. He used it in scarlatina maligna, and had other physicians followed his teaching in the treatment of diphtheria instead of treating with depletion as a simple inflammatory disease, their success would have been greater. To show that I was not mistaken in my diagnosis I will state the fact that nearly all of these cases had scarlet fever the preceding year.

COUNTER-EXTENSION WITH ADHESIVE PLASTER.

BY J. M'F. GASTON. M. D.

The use of adhesive plaster for the purpose of extension is generally and favorably known to the profession, but its application as a measure of counter-extension requires to be brought more fully to the attention of practitioners; and a case of fracture of the femur, which has been treated chiefly by this process, may serve to illustrate this procedure.

Rufus, a servant of Mr. John Davis, was placed under our care on June 16th, and upon a special examination with my partner, Dr. A. N. Talley, a comminuted fracture of the lower third of the shaft of the femur was discovered. With the assistance of two of our students, extension was effected, and after coaptation of the fragments, the roller bandage was applied to the entire limb. Three splints were next fitted to the thigh, and Welch's long extension apparatus was then adjusted by a gaiter, to secure the ankle to the foot board beneath, and a silk handkerchief, wrapped around a roll of cotton as a perineal bandage, tied firmly to the upper end of the long splint above the crest of the ileum. By means of a screw connected with the apparatus, extension was now made, until the measurement from the anterior spinous process of the ileum to the internal melleolus was found to correspond to that of the sound limb.

The muscular development of the thigh afforded great resistance, yet the extension was steadily maintained for a week, when there was such excoriation from the perineal bandage as to induce a discontinuance of this mode of counter-extension for the application of adhesive plaster, on the principle, but not precisely in the place, suggested by Dr. Gilbert, of Philadelphia.

A strip of strong linen plaster, two inches wide, and two feet in length, was doubled upon itself at an angle so as to make a loop, and yet both of the extremities having their adhering surfaces in the same direction. One of the free ends was pasted closely over the spinous process of the ileum, and extended down towards the inguinal region; while the other end was carried down and pasted over the trochanter, so that both pieces had firm attachments by the closeness of the integument to these bony prominences, and thus presented resistance to traction upon the loop above. Transverse strips were placed from one piece to the other to secure their adhesion. A piece of homespun was now passed through this loop and made fast to the upper end of the long splint, thus effecting counter-extension. When the apparatus was tightened by the screw it was found that all the indications were met satisfactorily, while the excoriated hip and the perineum were left entirely free for such applications as the ulceration required. The strips adhered closely for three weeks without interference, and have proven an efficient means of counter-extension.

In connection with this application of adhesive plaster, I would

notice its use also in a case of fracture of the patella, which oc curred in our practice recently. Being called to a servant of Mr. Robert Bryce, Dr. Talley and I went together, and found a transverse fracture of the patella, with the upper fragment drawn up considerably by the contraction of the muscles. Bringing the fragments in apposition, a figure-of-eight bandage was first applied, but subsequently, at the suggestion of my brother, Dr. J. B. Gaston, we resorted to the use of adhesive strips to keep the fragments in apposition. Three pieces of plaster, an inch wide and twelve inches long, were carried from above the knee round the inner side of the patella to the upper and inner part of the leg; while three other similar pieces were carried from above the knee around the outer side of the patella to the upper and outer portions of the leg, thus keeping down the upper fragment of bone securely. Another set of strips were attached in a semicircular arrangement around the lower fragment, by which accurate apposition of the fragments was effectually maintained. This plan of treatment is attributed to Dr. Neill, and Erichsen makes reference to it in his work on surgery. Our case progressed favorbly, and though the union is not osseous, the connecting layer of cartilage is perhaps shorter and firmer than is usual in this accident, and does not intefere at all with locomo-

In a fracture of a similar kind, which I treated some years ago, the case was managed throughout by the figure-of-eight bandages, with a good result as to the union of the fragments, but I had to keep the entire leg and thigh encircled with a roller,—the latter to control the action of the muscles, and the former to suppress the swelling which would have ensued from the obstruction to blood vessels and absorbents at the knee. This difficulty is entirely obviated in using the adhesive plaster, as it extends only partially around the limb, and leaving that region free where most of the vessels are located. And the same views hold in reference to their application to the upper and outer part of the thigh, instead of extending round the inner part, where the vessels and nerves are located.—Charleston Medical Journal.

BOOKS AND PERIODICALS.

BY THE EDITOR.

THE winter months are seldom prolific in the issue of new books, and within the past four weeks the publishers have not produced many of interest to the profession, and even of those, but three or four have found their way to the West.

But of Periodicals the New Year has already given birth to several, while the serial issue of the more valuable of the old ones are well represented by the prompt appearance of those due.

The New American Cyclopædia, published by D. Appleton & Co. of new New York, has reached its eighth volume, which embraces the articles included between Fugger and Haynau, quite a considerable number of which are of direct and immediate interest to physicians.

On the appearance of each of the former volumes of this admirable treasury of knowledge, I have expressed my high appreciation of the value of the work; and even at the risk of repetition, I again say that I am sure no work of equal value has been before published in America.

Prof. John Hughes Bennett's great work, Clinical Lectures on the Principles and Practice of Medicine, the third and greatly enlarged edition, has just been reproduced in this country by the enlightened liberality of the New York Medical Book publishers, S. S. and W. Wood

When Prof. Bennett's work first appeared it took an equal position beside the standard works of the profession, and has more than sustained its earlier reputation. The present edition is improved by the addition of much valuable matter illustrated with numerous wood cuts, until now it has become a beautiful volume of near a thousand closely printed pages, and illustrated with over five hundred cuts.

It is an extremely valuable treatise on clinical medicine, exemplifying nearly the entire subject of practical medicine by means of cases treated at various hospitals, illustrating the views of pathology and the treatment of the author with great clearness and distinctness.

The publishers have done full justice to the author in presenting

the work in such beautiful form that it may be taken as a model by other publishers. The price is \$5,50.

A monograph upon the *Physiological Effects and Theraputical Uses of Aconite* translated from the German of Dr. Reil, by Dr. Henry. B. Millard, has just been published by William Radde of New York.

Some six years since, Dr. Roth of Paris offered a prize of five hundred francs for the best *homæopathic* essay on Aconite, and to this monograph the prize was awarded.

It is certainly the most complete, historical, physiological, toxocological, experimental, pharmaceutical, and therapeutical description of that plant that was ever published. It is a very wonder of a book, and will amply repay a careful examination.

The Physician's Pocket Day Book, Visiting List, Diary, and Book of Engagements for 1860, published by Joseph Sabin of Philadelphia, appears to be a reprint of the work for last year, without that revision which is necessary to a correct presentation of the ever advancing science of medicine.

The errors in regard to the American Medical Periodicals are two-fold. Of those enumerated, erroneous statements are made in at least *seven* instances; and quite a number are passed by without mention.

Aside from the errors referred to, it is a very convenient Day Book for practitioners in cities, and doubtless will command a ready sale.

Dr. Isaac Casselberry has sent the Journal his pamphlet on Ancient Marriages of Consanguinity, which indicates more than usual research into the history of remote times, and an industry every way worthy and commendable. Such monographs possess a permanent value.

Dr. J. F. Wilson of Louisville has sent his *Dental Essays*, a pamphlet designed for the people. The idea of instructing the people is worthy of high commendation, and good popular scientific publications are always valuable, yet but few persons in any profession appear well adapted to address the public on subjects connected with their calling.

Braithwait's Retrospect for the half year ending the first of

January, came very promptly, and as is always the case filled with matter of great interest and value.

Rankin's Abstract, although a little slower in making its appearance, is in no regard behind its more aged rival. I have been accustomed to give it the preference, but have never, since their first appearance, allowed myself to do without either. They have become a necessity with me.

The British and Foreign Medico-Chirurgical Review for January, contains a full account of the opinions and practice of many eminent in the profession on Diphtheria, besides other important papers.

The North American Journal of Homeopathy has made its quarterly visit with commendable punctuality. As yet I have not been able to give it a careful examination.

The London Lancet for January and February, being the first and second numbers of volume first of the new series, contain matter of far more than ordinary interest.

The North American Chirurgical Review, the Charleston Medical Journal and Review, the Medical Journal of North Carolina, and a host of monthly medical journals, testify to the unceasing activity of the professional mind, and desire on the part of physicians to keep pace with the progress of the profession.

Several new medical periodicals have sprung in to existence with the year, but of them I may speak as their scope and character become developed.

LEAD COLIC.—Briquet believes the seat of lead colic to be in the muscular abdominal parieties, and not in the muscular fibres of the intestinal canal. He used Faradization, directly applied to the most painful point, and relieved twenty-four patients out of forty-two, with this method, at one application; ten after two; seven after three; and one after four. Dr. Briquet's observations, however, are not absolutely indicative of the correctness of his views, and the efficiency of his treatment, because he made use of opium, sulphur baths, etc., besides electricity.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

ACETATE OF AMMONIA.—A solution of this salt in water, under the name of Liquor Ammoniæ Acetatis, or spirit of Mendererus is often used in the later stages of fevers. It possesses strong solvent and antiputrefactive properties, enabling it to dissolve those atoms of the solids which have lost their vitality during the prevalence of the disease; and holding them from undergoing putrefactive decomposition while on their way to be eliminated.

It may be applied locally as a Solvent and Antiputrefactive in cases of bruises, hurts, swellings, or enlargement of glands. Mr. Brande lauds its use as a topical application in mumps, applied hot by means of a flannel, over the parotid glands or to the mammæ or testes, when those organs become involved. Dr. Maushmer speaks of having cured hydrocile in children by means of the application of compresses to the scrotum wet with it, properly diluted. Dr. Thomson has applied it to the scalp in cases of porrigo, and speaks favorably of its use. It has been used advantageously as an eye wash in purulent ophthalmia, by mixing it with a large quantity of pure water, or rose water.

As Ammonia is a stimulant, and readily changes to a gascous form on its way out of the system, it increases the secretions of the skin and the lungs, and thus serves admirably as a Sudori-

gentic and Expectorant remedy.

It is prepared by taking Dilute Acetic Acid or vinegar one pint, Carbonate of ammonia in powder a sufficient quantity. Add the carbonate of ammonia gradually to the acid, until it is saturated.

The dose is two or three teaspoonfuls, in sweetened water, once

in two or three hours.

ACETATE OF AMYLIC ETHER.—This acetate is prepared by distilling a mixture of Fusel Oil, one part, and Acetate of Potassa,

two parts, and concentrated Sulphuric Acid, one part.

As it possesses the odor of the jargonelle pear, an alcoholic solution of it is sold to the manufacturers of fictitions spirits and perfumery and confectionary, as jargonelle pear essence: If thirty parts of the acetate of amylic ether be mixed with one part of acetic ether, and the mixture be dissolved in one hundred parts of alcohol, it forms the bergamot pear essence, used for the same purposes. When the acetate of amylic ether is mixed with butyric ether and the mixture dissolved in alcohol, it forms the banana essence of the manufacturers of perfumery and confectionary.

ACETATE OF COPPER.—This salt is prepared by dissolving verdigris in vinegar or dilute acetic acid by the aid of heat, and then allowing it to cool, when rich deep blue crystals are formed.

Formerly caustic ointments or salves were made of which this was one of the ingredients. At present it is not used in medicine.

ACETATE OF IRON.—This salt is made by taking of the carbonate of Iron one ounce, and Acetic Acid six fluid ounces.

Add them together, digest a sufficient length of time with agitation, and then filter the liquid. It acts on the system as do other Chalvbiates.

A tincture of this salt is officinal in the Dublin Pharmacopæia, under the name of *Tinctura Ferri Acetatis*. It is an agreeable preparation of iron. The dose is from ten to twenty

drops in sweetened water.

ACETATE OF LEAD.—Sugar of lead. Saccharum Saturni. There are at least five compounds of acetic acid and the oxide of lead known to the chemists; the Hexacetate, Triacetate, Diacetate, Sesquiacetate and the Neutral Acetate. Two of these, the neutral acetate and the diacetate have been used in medicine. The one commonly used is the Neutral Acid. The Edinburgh Pharmacopæia gives a formula for the preparation of this salt. It is usually prepared by placing thin sheets of lead in shallow vessels containing distilled vinegar, or acetic acid, or pyroligneous acid, and the plates are changed in position often, to change the lead first into a protoxide, and then by solution in the acid to a solution of the protoxide of lead until the acid is saturated, which forms the neutral salt, which by evaporation is led to crystalize, when the supernatent liquid is decanted and by another evaporation yields more crystals.

Acetate of Lead combines the astringency of vinegar or acetic acid, with the sedative power of the lead, and hence is often used when these two properties or either of them are required. It is a powerful astringent and its potency in that particular has led many to make use of it overlooking the hurtful and dangerous

properties of the metal with which the acid is combined.

For the actions of the metal, Lead on the system, as more fully

detailed, see Plumbum.

Although the acetate of lead is frequently used externally for its Sedative influences, internally it has been more frequently administered with the view of its acting as an Astringent, while its

sedative properties have been less called for.

In hemorrhages from the lungs, the uterus, the bowels, in which its power of restraining the blood is very marked, it has frequently been administered and highly lauded. It has also been used in diarrhæa, dysentery, cholera-morbus, cholera-infantum, and in colliquative diarrhæa and sweats.

In mercurial salivation, stomatitis, and stomatitis materni, as well as in inflammations and ulcerations of the stomach and bowels, has been much used both internally and as a gargle and mouth

wash. It is often combined with opium or morphia in these cases, as well as to form collyria in ophthalmia, and enemata in

diseases of the bowels or the vagina or uterus.

The dose when given internally, is from one to two grains. As a local application in the form of a collyrium, mouth wash, wash for bruises, or as injections, the quantity used in the solution at one time is very much more than is taken at a dose internally.

A very strong objection to the use of this or any other preparation of lead, as a medicine, whether administered internally or applied locally, is that it is apt to produce a peculiar affection of the alimentary canal known as colica pictonum or lead colic, as well as an affection of the muscles in other parts of the system, especially of the extensor muscles of the upper extremities, which is characterized by a wasting away of the muscular tissue together with a loss of power. This is often know as lead palsy.

That it has not always maintained its high reputation, even in those cases where it appears most applicable, may be inferred from the remarks of many authors and teachers. Prof. Meigs has said;—"Sugar of lead is thought to be a powerful article in the treatment of these hemorrhages. I do not like it nor do I much believe in it." It is said that the late Prof. Hosack was opposed to its use internally. Others very eminent in the profession, and whose opinions and practice are deserving our serious consideration, have refused to administer it internally, and for the best of reasons.

There is much danger attending even the most careful use

of it.

Dr. Johnson of New Jersey says: "Four times has the most painful solicitude been awakened in me by the production of saturnine disease from the internal use of this article; twice in the form

of colica pictonum, and twice in that of paralysis."

Dr. Becking speaks of a young person who was laboring under consumption and to whom he gave the acetate of lead, which produced a bluish state of the skin, puffed face, a convulsive cough, difficulty of respiration, with partial paralysis of the feet. This state continued two weeks when there was a violent access of fever, heaviness of the head, paralysis of the eyelids, convulsions in the face and extremities, with insensibility, stupor or delirium for three days, when the patient died.

Dr. Charliss of New Jersey, states that his wife while on a visit in the southern part of the state was attacked with uterine hemorrhage, for which she took the acetate of lead in solution. At the end of six days she had severe neuralgia in her toes, which extended to her feet, then to her ankles, and in a few days affected the whole of both limbs; then followed constipation, and

in course "the most severe colic, such as I pray no human being may ever again endure." After the lapse of two months and a half the patient had recovered from the effects of this agent. For a further exposition of the toxicological effect of this metal, se *Plumbum*.

A solution of the acetate of lead as well as of the nitrate of the metal, has been used as an Antiputrifactive and Disinfectant agent.

ACETATE OF MAGNESIA. M. Regnault has proposed the use of this salt as a Hydrogogue Cathartic in those cases where a cathartic of that kind is desired. It is very soluble both in water and in alcohol, and will attract in the moisture of the body to it when in the stomach or bowels, by osmosis or membraneous circulation, and hence serves to remove a large quantity of aquious fluid from the body.

It has been proposed as a substitute for Citrate of Magnesia, which it somewhat resembles in taste, but is less agreeable than

the citrate.

For therapeutical purposes it may be prepared by saturating the carbonate of magnesia with acetic acid, and evaporating any water present. Thus prepared it is a fluid, or semi-fluid of the consistency of honey. For use, Mr. Regnault proposed to combine it with three times its weight of the syrup of oranges.—Like the citrate of magnesia, the dose is large, requiring of the mixture proposed by Regnault from three to six fluid ounces.

It has great attraction for water, and unless carefully kept it will attract so much from the atmosphere as to dilute it and greatly reduce its strength, which fact, and also its being less agreeable than the citrate has prevented its being much used as

a medicine.

ACETATE OF MERCURY.—This is prepared by adding a solution of the proto-nitrate of mercury to a solution of the acetate of potassa, acidulated with acetic acid. A double decomposition and recomposition takes place, forming the nitrate of potassa and the proto-acetate of mercury.

Although this is one of the milder preparations of mercury, yet Guarin, and Columbier and Voglier report cases where it produced violent vomiting and purging, and severe abdominial pains

and bloody evacuations, with other dangerous symptoms.

It is not often used in medicine, but is sometimes administered in syphilis. Of its value however there may be doubts. It has

been administered in doses from one to five grains.

ACETATE OF MORPHIA.—This salt is prepared by taking pure morphia, entirely freed from Narcotina, and adding to it water and sufficient acetic acid to combine with it to the point of saturation. The water is then evaporated and the salt crystalizes.

It is difficult to obtain the acetate of morphia entirely pure, as during the process of evaporating the water it is quite liable to undergo some decomposition, producing a mixture of pure morphia with some neutral acetate and some super-acetate of morphia. To remedy this difficulty and render the acetate of morphia of commerce soluble in water, it is necessary to add a little acetic acid to the water, when the acidulated water will readily dissolve the salt.

The peculiar value of this salt of morphia as a therapeutic agent arises from the fact that with the somniferant force of morphia there is combined the astringent property of acetic acid. Hence its great value in all painful and excitable conditions of surfaces, or of organs near the surface, to which this can be applied; especially if along with the pain and excitation there be an unusual amount of discharge.

Magendie made experiments with the acetate of morphia which determined its power to produce coagulation of the blood. Hence in Hemorrhages and Dysenteries it has been prescribed with confidence. Custin made use of it in inflammations of the joints, both as a sedative, and to lessen the secretion from the synovial membrane. It has been used with benefit also in Asiatic Cholera.

As a mouth wash and gargle in mercurial salivation stomatitis and catarrh, it is also of use locally applied. Also in purulent ophthalmia, in leucorrhoea, gonorrhoea and gleet. It is often sprinkled on the surface of a blister both to act locally and to relieve a painful condition of the neighboring nerves. For the latter purpose, it has been introduced beneath the skin by inoculation, or to the deeper seated nerves by means of a fine pointed syringe. It has been used topically in tetanus and hydrophobia.

In painful conditions of the stomach with increased secretion from its mucus surface, in various forms of diarrhoea and dysentery, in profuse expectoration and colliquative perspiration, it has

been administered with great advantage.

To insure it in the form of the acetate, it has usually been administered in the form of solution, and the Solution of the Acetate of Morphia, is officinal in many Pharmacopoeias.

The dose is from one eighth to one fourth of a grain, or as

much of the solution as contains that amount of the salt.

ACETATE OF POTASSA.—This salt is prepared by adding a little water to acetic acid, and neutralizing the acidity of the mixture by the gradual addition of Carbonate of Potassa. The liquid is then evaporated by means of a sand bath to the proper consistency, and on cooling, the salt will form a cake.

This has been known for a long time to the profession, but has not attracted the favorable attention it deserves. Under the names of diuretic salt, regenerated tartar, and other appelations, it was formerly used somewhat, but latterly it is seldom administered

except as a diuretic in dropsy.

But according to the researches and experiments of Golding Bird, it is rather as a Solvent and Depurant that it will be found of the greatest value. It is as a renal depurant, or as Golding Bird called this order of agents, a Renal Alterative, or Chemical Diuretic, that acetate of potassa is of most value. In one of his experiments Bird gave a young lady three drachms of the acetate of potassa in the course of twenty-four hours, and he found that there was in her urine in solution, of the solids of her system, one hundred and ninety grains more than she had previously excreted when not using any medicine. Other salines have a similar influence on the system.

Dr. Duncan considered this an agent of great value; and one of our best depurants. Dr. Easton has used it for this purpose in many skin diseases. In these diseases and dropsies it appears to dissolve the substances to be thrown off, and thus act as an admirable adjuvant to others which may more properly be classed with

the Uragentia.

In most cases where a solvent is required in conjunction with other remedical means; as,—in dropsies, glandular enlargements, scirrhus of the pylorus or of the rectum, in visceral enlargements, engorgements; in the various skin diseases, as psoria, eczema, lepra, etc.; in lithiasis, or an acid condition of the urine, it may be administered.

The dose is from fifteen to sixty grains six or eighth times a day, dissolved in some bland liquid, or in sweetened water.

Of course it must never be given when there are an excess of

phosphates in the urine.

ACETATE OF QUINIA,—This salt is seldom used in practice. It is prepared by taking dilute acetic acid, and dissolving in it Quinia to saturation, and evaporating the water by gentle heat. It has been tried by Wutzer, and by Sunderlin, but appears to pos-

sess no merit superior to the Sulphate of Quinia.

ACETATE OF SODA.—This acetate may be prepared by using the Acetic Acid of commerce, placed in a porcelain vessel, and to that add of Carbonate of Soda to neutralize the acid. Then add a little acid so as to leave it slightly in excess, and set aside the liquid for the salt to form crystals, when the mother liquid may be drained off and the crystals dried on porous bricks. The crystals should be kept in closely stopped bottles.

[To be Continued.]

BISMUTH IN GLEET AND LEUCORRHOEA. -M. Gaby states that repeated trials have convinced him that injections of oxide of bismuth constitutes the very best treatment of gleety discharges. Thirty parts are suspended in 200 of rose water, and so injected as to leave as large a deposit of the salt as possible in the canal. Three injections per diem should be employed at first, and then fewer. He has collected forty-three cases thus treated with success, five of which he briefly relates. Urethral discharges, unconnected with gonorrhea, as observed in certain diatheses, masturbation, venereal excesses, etc., and increasing in quantity even after pure connection, have been treated by this means in three cases. Balanitis and balano-posthitis, and herpes præputialis yield rapidly to bismuth applied in powder after cleansing the part, and then covering with cotton. The various forms of vulvar leucorrhæa may be treated with bismuth. One of these is entirely confined to the vulva, whether appearing as a consequence of follicular vulvitis, or without preceeding inflammatory symptoms. The latter is often met with in little girls. Pregnancy. want of cleanliness, masturbation, worms, or contusion, are among the exciting causes. After removing all complications, the bismuth acts upon the discharge like a specific. In the leucorrhea of girls, powdering with bismuth is an excellent remedy. In ordinary vaginal leucorrhœa, occurring in women otherwise healthy and having no other affection of the genito-urinary organs, the bismuth succeeds well. The cases of urethro-vaginal leucorrhea are almost always of infectious origin. They have in some instances vielded to bismuth when resisting obstinately other remedies. It is to be remembered that all the cases in which the bismuth is useful are of the chronic description; and that pain and other signs of acute inflammation contra-indicate its employment.—Bull. de Therap.

MARRIED.

On the 20th of Oct. 1859, at the residence of the bride's father, by the Rev. J. W. T. On the 20th of Oct. 1659, at the residence of the bride's lather, by the Rev. J. W. 1. McMullen, Dr. D. L. Overholser, of Napierville, Ill., to Miss Mary A. Redd, of Logansport, Indiana.
In Dublin, N. H., Nov. 1st, 1859, by Rev. W. F. Bridge, J. O. Mattoon, M. D., of Ashburnham, Mass., to Miss Emily A. Townsend, of Dublin.
In Sherburne, Chenango Co., N. Y., by the Rev. A. McDougall, T. R. Billings, M. D., of Norwich, N. Y., to Miss Carrie M. Pollock, formerly of Wilmington, N. C.

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INFLAMMATION.

BY THE EDITOR.

In pathological investigations the profession have been very much inclined to study rather the ravages, the organic changes produced, and the results of disease, and not those earlier departures from health in function and structure, which are of greater interest in a scientific and therapeutical point of view.

In regard to no pathological condition has this tendency been more manifest than in investigations in regard to the nature and effects of *Inflammation*. And the result is, that those who have bestowed most attention to this matter have not been able to determine what is the condition of an organ either functionally or structurally to which the appellation properly should be given; and sometimes have expressed more than a doubt as to the propriety of considering the condition of inflammation a disease, or one demanding any treatment to counteract its tendency.

But those who have studied pathology in the dead-house on the cadaver, instead of the earlier departures from health at the bedside of a living patient, have supposed that inflammation of one or more organs has been the cause of the fatal termination of nearly all forms of mortal maladies; and hence when looking for the cause of death in most cases, have directed their search for indications of inflammation, and on finding them have been satisfied with the conditions observed, with but slight, if any attempts at searching out the remoter causes and conditions of disease.

Those who have written on this subject have appeared to suppose that the progress of inflammation is quite uniform from its commencement, at least for a time, and that the various terminations, so called, are the result of extraneous influences modifying the inflammation, and not as is frequently the case, the result of varying conditions, although those conditions have been attempted to be expressed by an unvarying term.

The ancients attempted to define the word by the results observed to follow the disease, or from the external marks which were found to indicate its presence. Celsus said;—"Note inflammationis suntquator; rubor et tumor, cum calore, et dolore;" but the symptom thought to be the most prominent and most important was heat, and hence the name. Borhaave, however, considered that inflammation was caused by an obstruction to the flow of the blood. This yielded, place in France, to the notion that an increased flow of blood to the part, or hypersemia was its cause. In Vienna it was thought that exsudation or swelling produced inflammation; while more modern neuro-pathologists maintain that the disease is caused by a derangement of the nerves of the part, and that pain is the most certain indication of the presence of inflammation.

Thus the calor of Boerhaave, the rubor of the French writers, and the tumor of the Viennese physicians, have been supposed to be proved of less value, in fact of no absolute pathological importance, compared with the dolor of the neuro-pathists.

But neither heat, redness, swelling, nor pain, are always present in inflammation, although as *results*, not causes, they are usually manifested.

By the word Inflammation, I mean simply, that from some cause operating either from without, or through the circulating fluids, the composition of the part diseased is so altered of itself, or in its relations to other parts in its vicinity, that the vital forces are no longer able to hold in check the chemical forces, and the action of those chemical forces produce a tendency to death and decomposition in the part affected.

Inflammation may properly be divided into two principal forms, without taking into consideration the vast variety of forms resulting from external injuries. These two forms of inflammation are the parenchymatous, usually occurring in the structure of organs, and not producing any perceptible exsudation or swelling, and frequently unaccompanied with any pain:—and the exsudatine or secretory form, which more frequently occurs on the surface or

envelopes of organs, and produces fibrinous or mucous exsudations in accordance with the nature of the tissue affected.

The form of inflammation present in any tissue appears to be governed by the nature of the tissue subjected to the disease. Certain tissues seem capable of taking on only parenchymatous inflammation; while other tissues, if inflamed, appears always to throw out an exsudation or secretion. This idea will be explained more fully when treating of the inflammations of special organs and tissues.

As most of the observations which have been made of the *phenomena* of inflammation under the microscope and otherwise, have been directed to the circulation of the blood in their vessels, and the exsudation of the plasma of the blood through the walls of those vessels, only the *exsudative* form of inflammation has been attempted to be described by such observers; and but a part only, and not the commencement of the disease has been observed and described by them.

As most of the results of inflammation as observed by the pathological anatomists in their post mortem examinations have shown the parenchymatous form alone, or the parenchymatous form in combination with the exsudative form of inflammation, it has been found that those who have made clinical observations and those who have made post mortem observations have not been agreed either in regard to the nature, the phenomena, the results, or the therapeutics of inflammation; and those who have attempted to combine the two methods of observation have observed apparently contradictory phenomena, and have strangely concluded that inflammation is both a healthy and a diseased condition, and is both reparative and destructive in its tendencies; and therefore should be both combatted and aided by physicians and surgeons.

All the uncertainty that is felt in regard to the nature and tendency of inflammation appears to have arisen from a want of appreciation of the two forms of the disease here mentioned; and from the supposition that the first departure from health of an inflamed part is to be observed within the blood vessels of the part diseased.

It should be remembered that the arteries are as it were a continuation of the heart, their walls being amply supplied with

ramifications of the branches of the same nerve which goes to the heart and gives to it its rythmical motion,—the omnipresent regulator nerve.—That all the coats of the artery are lost in the smallest capillaries except the innermost coat, which continues along the capillaries to the veins, and there becomes the outermost coat of the vein. The result of this is;—That the arteries in a great degree regulate and control the circulation of blood through them, which is controlled or modified by the action of the regulator nerves governing the arteries. But the veins, not being supplied with branches of the regulator nerves, are of a passive nature, and are themselves acted upon by the fluid within them. That the nerves within the coats of the arteries are constantly impressed with the abnormal constituents floating in the plasma of the blood may be properly inferred; but many poisons that produce inflammation in those organs where the poison becomes accumulated, do not produce any of the pains or phenomena which are constant accompaniments of all febrile diseases. From the constant recurrence of the fact that morbid material may float in considerable quantities in the blood and produce neither febrile nor inflammatory symptoms, until it has so accumulated in some locality as to depress the vital force of such locality and to produce unusual chemical changes in the part, the conclusion has been drawn that fever is manifested only when the corpuscles of the blood are undergoing chemical change with a tendency to decomposition; and that inflammation is manifested only when a simular change has taken place in the solids.

But it is said that inflammation with exsudation takes place when no decomposition follows. Without any doubt, when the plasma of the blood has become changed and acting upon the coats of the capillaries has rendered them no longer capable of preventing abnormal exsudation into the surrounding structures,—or, when from external injury, or other local hurt, the walls of the capillaries have been weakened or ruptured and the plasma of the blood or the blood itself has become diffused within the tissues, this exsudation may serve as a shielder or protector of the part it is in contact with, and thus protect it from mechanical or chemical injury and destruction.

But we can no more consider the exsudation, or the condition

which caused the exsudation, normal, than we can consider pus a normal product, or the crust or scab of dried pus which covers an ulcer and shields or protects the parts beneath from atmospheric or other injurious contact, a condition or product of health. Exsudation within the tissues, where the exsuded fluid does not normally belong, is no more a condition of health than is an exsudation upon the surface; and no one will contend that scaly or scabby forms of cutaneous diseases are conditions of health, however valuable such exsudations may prove in protecting the subjacent diseased structures from harmful contact.

It should be even borne in mind that at least the walls of the vessels containing the fluid exsuded must have been diseased prior to the flowing out of the exsudation, and that frequently this primary diseased condition has been entirely overlooked. And the presence of an exsuded fluid in a locality where it does not belong in health is of itself an abnormal condition, even while the exsuded fluid serves to shield the parts from further injury.

It has been supposed that inflammatory exsudation is necessary to repair many forms of injury; that cuts and other solutions of continuity cannot be repaired except as the processes of inflammation lead to an exsudation of the material needed to supply parts lost, or at the least to serve as glue to unite divided tissues. But it has been observed that parts do unite where there has been no inflammation, and that in proportion as inflammatory action has been promoted or has been allowed to progress, has reparation been retarded; and the conclusion is inevitable that even the exsudative form of inflammation is not necessary for the reparation of injuries, although the vital forces are often capable of producing reparation in injured parts in spite of the inflammation the injury has caused.

Those who have been accustomed to observe but the exsudatory form of inflammation, and to consider the exsudation the inflammation *per se*, and have become aware that certain processes of softening and absorption require time to complete them, have asserted that inflammation cannot be cut short or hastened in its stages by any mode of treatment. But inasmuch as the exsudative is only one form of inflammation, and the exsudation only a

result of the preëxistant disease, it will be perceived that the continuance of the exsudation after it has occured, for a definite period of time is no good reason for the conclusion that the disease that produced such exsudation could not have been cut short by appropriate means.

While exsudation through the walls of the capillaries follows a previous disease either in those vessels or in the contents of the vessels, or both, and is usually accompanied with the usual phenomena known as the symptoms of inflammation, and particularly by swelling and heat, and perhaps also with a sense of throbbing or other derangement of the circulation of blood through the part effected, such phenomena are not usually observed in parenchymatous or organic inflammation.

An organ, or a part of an organ may take on inflammation, which may proceed to absolute death of the part affected; and yet if their be no considerable amount of exsudation to impinge upon the adjacent live tissues there may not have been manifested any of the usual so-called symptoms of inflammation. This fact will be illustrated hereafter.

The old idea that inflammation is a condition of exalted or increased vital activity, naturally and logically led to the so-called antiphlogistic or depletory, forms of treatment; and the unfortunate appellation of antiphlogistic once applied to the various forms of depletion with the lancet, antimony, spare diet, etc., has proved more powerful than the demonstrations of Louis or Magendie, or the reasonings and chemical demonstrations of the most scientific and skilful physicians of modern times. Without any doubt the unfortunate use of that word still prevents many earnest and thoughtful practitioners from resorting to those methods of treating inflammation that are proved beyond dispute the only methods in many instances capable of arresting its destructive progress.

It should be understood that the blood may circulate too sluggishly as well as too actively;—that there may be a loss of nerve force as well as too great a manifestation of nerve energy;—and that debility or starvation are as liable to be followed by inflammation as plethory or over-activity. Hence it is that stimulants to bring the circulation up to its normal activity,—to restore the

lost nerve force; and that supporting, nutritive diet, have been found of such value in most forms of inflammation. In fact, by far the largest number of patients suffering from inflammatory forms of disease are suffering also from debility and require, not depletion or the so-called antiphlogistic treatment and regimen, but require proper stimulation and a supporting, sustaining, generous course of dietetics that shall bring their systems up to the standard of health.

But it is observed that in certain forms of exsudative inflammation where the disease originates in the plasma of the blood, as in pneumonia and croup, there is an undue amount of arterial excitement. This excitement of the circulation can be controlled far better and with greater safety to the patient by the means of special sedatives, as Gelseminum or Veratrim viride, than by means of depletion; and those heart sedatives are by no means incompatible with a supporting, sustaining diet.

After inflammation has been produced destruction and softening of an organ or tissue, if the parts thus destroyed are absorbed into the system, the blood becomes poisoned thereby and fover results. What has been called surgical or traumatic fever is produced by absorption of the products of inflammation from the wound or hurt. Hectic fever is produced by a similar cause. So also is puerperal fever. The fever following the absorption of matter from the pustules of small pox is another instance of what may be called an *Inflammatory fever*. Some forms of inflammatory fever are produced by changes in the plasma of the blood and they are found to be quite difficult of cure.

The causes, symptoms, treatment, and result of various forms of inflammation located in different tissues and organs may be more properly considered elsewhere.

CHLOROSIS.

BY C. H. CLEAVELAND, M. D.

ONE of the most common forms of anamia, and one often quite difficult to cure, is Chlorosis. The usual symptoms of this disease are:—a pale, waxy, blanched, or greenish white appearance of the face and skin, as well as of the mucous membrane of the

lips, the mouth, tongue, and inside of the eyelids; a feeble, small pulse; loss of appetite; lowness of spirits; apparent protrusion of the eye-balls; and great languor and debility, with a tendency to faint, and a hurried respiration and palpitation of the heart on making any active exertion. Usually a whistling sound can be heard in the right jugular vein, caused by the stream of blood in that vessel being smaller than natural.

Whether it is in its inception a disease of the blood, or occurs primarily as a disease of the nerves-more especially of the nerves of the spinal marrow, as suggested by Dr. T. C. Miller, -- it has been repeatedly proven that as the disease becomes developed a most remarkable diminution in the amount of red corpuscles of the blood below the standard of health, is the cause of many of the diseased manifestations. Dr. Vetter gave to M. Simon a specimen of blood from a girl nineteen years of age suffering from uncomplicated long standing chlorosis. Simon found on analysis, that of 1000 parts of blood, only 1.431 was hæmatin, while in healthy blood, it usually amounts to something more than 6.000. Simon found the blood of a young man of seventeen vears to contain in the 1000 parts of the blood, 7.181 of hæma-The blood of a healthy unmarried lady of twenty-eight years contained 5.237 parts of hæmatin in the 1000. Herberger examined the blood of a chlorotic girl aged twenty years and found it to contain only 1.590 parts hæmatin to the 1000. Becauserel and Rodier analyzed the blood of two girls with strong symptoms of chlorosis, and in their blood they found but a small pro-Headland examined the blood of an anæmic portion of iron. girl before she had taken iron, and found that the blood corpuscles instead of being at the normal standard of about 120 parts to the 1000, had become reduced to only 50 parts.

But whatever may be finally discovered to be the cause of this ansemic condition, it may be well to consider the present views of writers, and especially if the treatment adopted to carry them out are those which have been found of value. Dr. Miller writes: "Notwithstanding the insufficiency of our knowledge in regard to the primary departure from health in chlorosis, we know that we need not wait until chlorosis cures itself; for while I consider chlorosis to be a disease which primarily originated in the nervous

system, and that the disturbances of the digestion, the circulation, and menstruction, are only secondary results, as maintained by Becquerel and Rodier, we know that if we apply at the proper time firm, persistent and rational treatment, with chalybeates and some other agents,—as St. Ignatius' bean, and manganese, combined with proper hygienic measures, the disease is surely cured, provided it be not complicated by some other form of incurable disease.

"Yet we hear men both out and in the profession lamenting the inefficiency of our remedies, and the frequent relapses that occur. Such relapses do not seldom occur, but are produced usually from a neglect of proper remedies by those routine practitioners who often prescribe for the name and not for the abnormal condition of the patient.

In the treatment of chlorosis, we need from the first to discriminate between a primative or idiopathic form of the disease; and that form which is consecutive or symptomatic of another primary departure from health. And each case demands also a careful and accurate investigation of every complication or modification, arising either at the commencement of the disease or at any time during its progress. Such complications or modifications will greatly modify the treatment required.

By such observations alone can the distinction between the idiopathic and symptomatic form of this disease be surely determined; and on a clear perception of the true state of the case, will the success of the treatment depend. It is sometimes difficult to distinguish the palpitation of the heart in chlorosis, from the palpitation of that organ when suffering from organic disease, and the following table of contrasts may serve to assist in making out the diagnosis:—

PALPITATION OF THE HEART IN CHLOROSIS.

Puberty, age, female sex.
Palpitation comes on suddenly, and disappears quickly. Periods of entire freedom from palpitation. Is increased by fatigue, or at

PALPITATION OF THE HEART IN OR-GANIC DISEASE OF THE HEART.

Hereditary predisposition.

Palpitation never entirely ceases, but continues at all times.

the menstrual period. Disappears in the same ratio as the disease is removed.

Palpitation commences simultaneously with the other symptoms of chlorosis.

Stimulants or iron lessen the palpitation.

Complexion is pale, without any redness.

Palpitation is manifested before the color of the face is changed. Often present from birth.

Stimulants increase the palpitation.

The whole face is not usually pale. The cheeks and lips are red.

There are other complications that are of importance to understand, but the cautious discriminating practitioner will find no great difficulty in arriving at an accurate determination of the facts in the case.

Prophylactic Treatment.—This has special reference to the physical and intellectual education of females, more particularly near and at the period of puberty at about which time this disease usually manifests itself. The health must be carefully attended to until menstruation is regularly and firmly established by a full and natural completion of the growth of the female organs and the certain and regular performance of their normal, functions. All excesses of diet, of pleasure, of study, or anything that can depress the vitality of the system by over activity, must be strictly guarded against.

Hygienic Treatment.—We should remove as far as possible all causes of mental depression, by changes of scenery and of surrounding circumstances. The diet is of great importance; meat and fresh vegetables, but not fat meat, nor much farinaceous food, will be found of value. The drink should consist mainly of pure water. Anything like positive fatigue, whether through labor or any form of physical exercise, must never be allowed. Plenty of sleep, but not an excess,—rest but not idleness, with agreeable variations of physical and mental occupation, short walks, easy rides, and a nourishing but not a stimulating diet, with milk and fruit, will be found beneficial.

The clothing should be warm and sufficient. The feet in par-

ticular should be kept warm and dry. The bowels should be regular in their action, with a daily evacuation. For this purpose Brandis highly lauds injections of cold water, while Ashwell prefers copious injections of warm water, to be used two or three times a week.

Medical Treatment.—Dr Miller, on the supposition that uncomplicated chlorosis is primarily a disease of the nerves has made use of the extract of St. Ignatius' bean in the following manner. He says:—

"In chlorosis I prescribe the following:-

R Iodide of iron, Ext. Gentian, §§ 3j Savine leaves, Pulv. Ignatius' Bean, §§ 9ss.

M. F. Pill. No. 60.

Of these I direct two pills to be taken at a dose three times a day. I also order frequent friction of the spine and extremities with the tincture of camphor.

I have made several trials of the powdered nux vomica, but I find it very slow in its action, and it has often failed of producing any good result; while a resort to the St. Ignatius' bean has produced an improvement in the health of my patient in a very few days. I never neglect to give the preparations of iron after I have made the proper impression on the spinal nerves; but I never combine purgatives with the chalybeates, as I consider that very bad practice. The cathartic will carry off the iron and prevent its finding its way into the circulation and thus restoring blood to a normal condition. Sydenham has condemned the folly of combining cathartics with the irons in strong and proper terms."

But there can be no dispute that in the great majority of cases if the blood is not the primary seat of the disease, it quite soon becomes implicated; and both microscopical and chemical investigations have determined that there occurs a very great deficiency in the number of red corpuscles, and of hæmatin in that fluid. The results of a few of those researches have been given. For the cure of chlorosis, therefore iron is demanded. The chalybeates are absolutely demanded in chlorosis to be given a long

period of time if needed, and with perseverance, but not in large quantities.

In chlorosis, in which the blood is always in an anæmic state, or is deficient in its coloring materials, the administration of iron produces a very marked effect. In one case Simon states that he found the solid constituents of the blood increased by nearly one half, and the hæmato-globulin was also increased in the same ratio by the use of iron.

In this instance, the girl took two ounces of the tincture of iron, and 64 grains of metalic iron during a period of seven weeks, so that the amount of the metal taken each day was not large. other parts of the system underwent a similar favorable change; for she lost the pale leaden color, her lips and cheeks became rosy, and she appeared well and strong. Simon reported a case of chlorosis in which the solid constituents of the blood increased under the use of iron, from 128.5 to 193.5 in the 1000 parts: the globulin, from 30 to 90; and hæmatosin from 1.43 to 4.59. After the patient had taken Chalybeates eight weeks he found the blood contained 4.029 in the 1000 of hæmtain. He gave the amonio-citrate of iron in five-grain doses, three times a day. After it had been continued four weeks, the blood was again analyzed, and the amount of corpuscles had increased to 76 parts. After another month, the red corpuscles had reached 100 parts in the 1000 and "the patient had improved immensely."

Andral and Gavarret give two cases, in one of which the iron was administered for four weeks, and the other only three weeks. In the first case, previous to the administration of iron, the blood was analyzed, and found to contain 46.4 thousandths of blood corpuscles. After the iron had been given four weeks, the blood corpuscles were increased to 95.7 in the thousand. In the second case, the amount of blood corpuscles had increased from 49.7 to 64.3, and yet the patient had taken iron but three weeks.

In order to see if the iron was excreted from the system during its administration,—while the patient was laboring under an anæmic condition, Headland examined the urine of a patient to whom he had been giving for some time thirty drops at a dose of the tincture of the sesqui-chloride of the iron, twice a day; but he was unable to detect any trace of the metal in the urine. When,

however, large doses had been given,—more than the system could take care of—it was found to pass off with the urine and the other secretions;—some of it passing through the mucous coat of the intestines and combining with the sulphuretted hydrogen of that canal, the resulting sulphuret of the iron giving to the feces their characteristic black color. That the black color of the fecal evacuation under the use of the chalybeates is, owing to the iron not being assimilated,—thus indicating that the metal is not needed, or is given in too large doses, was first pointed out by Berzelius, and the fact is a good guide in the administration of the irons.

When there is an irritable or deranged condition of the digestive organs, that must be removed if possible before the iron is administered; for the stomach not being able to act upon the metal, its administration can be of no benefit. Acids, as the elixir vitriol, sedatives, laxatives, or tonics, properly used will remove those complications and prepare the system for the iron.

But it must be remembered that the lymphatic glands are the organs which manufacture the white corpuscles of the blood, and the preparations of Manganese, when given in proper quantities, tend to greatly increase the number of those white corpuscles in the circulatory fluid. The chalybeates do not directly tend to increase the number of white corpuscles; and it, from any cause. these bodies are wanting to a considerable extent in the blood, as they are usually in all forms of scrofula, turberculosis, cachexy, and other conditions of the system where anæmia obtains, the iron alone may, and often does, fail of curing anæmia. those cases, Manganese, being the proper stimulant to the lymphatic glands, causes those organs to manufacture the requisite number of white corpuscles, and then the iron being administered, those white corpuscles are changed into red ones by the addition of the discs of the albumenate of iron; and the blood being restored to its normal condition, the anæmic patient is cured.

That this explanation is more than a well grounded hypothesis, is proved from the fact that the Cransac waters containing as they do nearly as much Manganese as iron, have been found far more efficacious in the treatment of anemia, and jaundice, and torpidity of the liver, than any chalybeate waters where the iron is not

combined with Manganese. M. Hannon says: "In cases where iron has not succeeded, it is desirable not to make a sudden transition to Manganese, but to combine the two remedies." He further says: "The use of this medicine should not be persevered in so long as that of iron, as the preparations are more readily assimilated." M. Petrequin believes that wherever iron is present (in the system) in appreciable quantity, Manganese co-exists with it. Hence, he says, iron alone will not always succeed in blood diseases. He has observed many cases of chlorosis which had obstinately resisted iron, as do those anæmias which are connected with cancer or organic degeneration. Other cases of chlorosis under his treatment, after having been benefited somewhat by the use of iron, have afterward remained stationary. Others still, appeared to be cured, but the cure was not permanent, In these cases, he found the use of Manganese slong with the iron completed the cure and made it permanent. Hence he no longer gave the iron alone, but alternating with or combined with Manganese. M. Burin-Duboison, of Lyons, made use of the combination of iron with Manganese with so much satisfaction that he devised a powder, a pill, a chocolate, a syrup, a lozenge, and some other preparations of these agents in combination.

In Dr. Johann Kovascy's vademecum clinicum are formulæ for the employment of the Oxide of Manganese in Chlorosis and Amenorrhæa, which I here present.

> P. Mangani oxidati nig., grs. iv, Ext. Sabinæ, Ext. Aloes, āā grs. x.

M. f. pill. No. VI. Dose, one pill at a time during the day.

R. Mangaui oxidati nativi, grs. iij, Digitali purpu. fol. pulv., gr. j, Secch. Lactis, grs. viij.

M. f. Pulvis. Div. in Chart. equalis; No. VI. Take three powders a day.

My own experience has led to the conclusion that it is better to give the two metals uncombined, and that Maganese need not be given for more than one or two weeks, while iron in some form should be given perhaps for months.

The very great value of iron as a therapeutic agent in anæmia may be inferred from the vast variety of preparations in use by

the profession. But probably the metal in powder, (Ferrum pulvis) in the majority of cases will be found quite as useful as any of the more fashionable combinations. It may be given in amounts varying from a half a grain to three grains daily.

Sometimes Aromatics and Tonics seem to aid in the assimulation of the iron; and the subjoined formulæ from Dr. Miller answer well.

R. Ferri pulv. Đ ij, Pulv. Rad. Calami, Cinnam, āā 3. j.

Div. in XII equal parts. Dose one Powder three times daily.

R. Ferr. pulv. 3 j, Pulv. Cinnam. 3 ss,

Extr. Card. bened. (Blessed Thistle), q. s.

M. F. Pill. No. LX. Dose, three or four pills three times daily.

R. Ferr. pulv. 3 i.

Pulv. Rad. Calami. 388, Extr. Hydraet. Canad. q. s.

M. F. Pill, No. LX. Dose three or four pills three times daily.

But if, with a considerable power of digestion, there is a torpid condition of the chylo-poietic viscera, the sulphate of iron subserves a very good purpose given in half grain doses in combination with extract of taraxicum, or with ginger, or with perhaps the addition of the extract of St. Ignatius' bean, or of nux vomica.

Treatment of the Complications of Chlorosis.—The modifications of the treatment demanded by the presence of other forms of disease will suggest themselves, and yet a few words in regard to them may not be out of place.

Sometimes there is a feverish condition produced by the state of the blood, and causing debility and irritability of the blood vessels and the nerves, rendering it quite difficult to administer iron in such form that it can be assimlated by the enfeebled organism. Rest, and the use of Acids, as acid fruits, and Tonics, with a milk diet, will be all that is then required. But if the heart beats too quickly, the tincture of Gelseminum will be of great utility.

When the digestion is imperfect, Tonics and Aromatics and Laxatives, as Aloes in small quantities, should be given in combination with iron.

Sometimes the derangement of the menstrual function demands a modification of the treatment, although ordinarily that function will become normal as the chlorosis is relieved. Leucorrhœa, dysmenorrhœa, or amenorrhœa may present themselves, but neither form of the disease can be benefited by active Emmenagogues. The preparations of iron with aromatics and tonics, and perhaps alternated with pills of one grain each of Oxide of Silver and Sulphate of Beeberina, given twice or thrice daily, with attention to the diet and regimen, will usually effect a cure.

Hysteria, affections of the brain, spinal irritation, intercostal pain, or neuralgia of the stomach, may require the use of Hyosciamus, or Strammonium, with the Sulphate or Chloride of zinc in addition to the chalybeates. If the disease is complicated with scrofula or tuberculosis, Iodine must be administered.

Treatment of Chlorosis appearing as the result of a former Disease.—Cancer, cachexia, chronic poisoning with mercurials, or antimonials, or excessive loss of blood, may produce chlorosis, which nearly always proves fatal. Syphilis or tubuculosis produce chlorosis also, but those forms of the disease appear susceptible of relief if not of permanent cure.

In syphilitic cholorisis, Iodide of Iron, or Iodide of Potassium combined with the chalybeate preparations, are found of great efficacy. As has been said, the same preparations are useful in tuberculosis as the cause of or complicating the disease.

Brandis, a late German writer of eminence says.—"I am convinced that Iron is the only effectual remedy for chlorosis, and that its use should be commenced at once. All use of salines, or depleting preparations of every kind are pernicious. From ample experience I am satisfied that the fashionable *preparatory* course of medication, previous to the use of the Chalybeates must prove injurious in nearly all cases.

NEW MODE OF RELIEVING RETENTION OF URINE.

Dr. Parker states that he has very recently succeeded, in two separate instances, in relieving retention of urine in the following manner:—

[&]quot;A gentleman lately entered my consultation-room in great

pain from retention of urine. He had not passed water for many hours; the bladder was much distended. He stated that ineffectual efforts had been made to pass a catheter, during which operations he had lost a considerable quantity of blood. I attempted to relieve him by the catheter, but failed to do so. I tried instruments of various sizes and various curves, but could not succeed in passing one into the bladder. I then took a No. 2 wax bougie, and inserted a small portion of potassa fusa into the end of it after the manner proposed by Mr. Whateley and practised by Mr. Wade in the treatment of permanent stricture of the urethra. I well moulded the wax over all but the extreme point of the caustic, and passed it rapidly down to the point of obstruction; by pressing against this for a short time it yielded, and I had the satisfaction of finding the bougie easily enter the bladder. I directed the patient to strain as I withdrew the instrument. stream of urine followed, and the bladder was emptied. The retention did not again occur, and very little irritation accompanied or followed the proceeding. On the next day the patient made water freely but in a small stream.

"The second case was very similar. The patient had traveled some distance by rail. The bladder was much distended, the symptoms urgent, and a catheter could not be made to enter the bladder. A small wax bougie was armed as in the last case, passed down to the stricture and firmly pressed against it. It yielded very quickly; the instrument entered the bladder, and a stream of urine followed its withdrawal. The patient had a second attack of retention two days afterwards which was completely relieved in the same manner.

"A modification of this plan might be attempted by inserting a small piece of potassa fusa into the extreme point of a small gum-elastic catheter, and using it without the stilette. I am sanguine enough to hope that many cases of retention of urine might be easily and quickly relieved by the simple means I have suggested, and more formidable and dangerous operations thus frequently avoided."—Charleston Medical Journal.

THE PHYSIOLOGY AND PATHOLOGY OF THE MOUTH.

BY C. H. CLEAVELAND, M. D.

The Mucus of the mouth subserves a variety of purposes. The power it possesses of protecting the surface which it shields from mechanical injuries, has already been mentioned. It has an equal power of protecting the part covered by it from chemical injurious impressions. It prepares the substances that are brought in contact with it for absorbtion. It absorbs water, and thus keeps the parts damp, soft, and pliable, and in a condition to allow a free osmotic circulation through it. It also serves as a safety valve or outlet for various morbific materials that may have accumulated in, or have been generated within the fluids of the mouth.

The power of the mucus to protect the mucus membrane from mechanical and chemical injuries may be observed at or near all the outlets of the body. In inflammation of the nose where the nostrils lose the power of secreting mucus, the nasal passages are acted upon by the air inhaled in the inspirations, and smarting and a burning sensation follows. The usual forms of pain in the earlier stages of what is called a "cold in the head" are illustratinos of the suffering that follows the absence of mucus.

When a person has "taken a cold" and the ordinary cutaneous transpiration has been checked, an increased flow of mucus may serve as a drain for the morbific materials. Diarrheea often serves to furnish an outlet for deleterious agents that have found lodgement in the blood. These facts were perceived early, and hence those agents, as the mercurials, that cause a greatly increased flow of saliva and mucus in the mouth have been considered specially valuable for the purpose of depurating the system of morbid materials not easily gotten rid of by other means.

The cyanide of potassium in the mucus of the mouth, as it is not to be found in any other part of the system, doubtless subserves some useful purpose there, but what purpose has not been determined.

The Water of the mouth is secreted in part by what are called arborescent glands. These appear as simply branched hollows in the mucous membrane. They may be compared to a bunch of grapes, or to places from whinh a bunch of grapes had been dis-

solved and removed. In these glands the papillæ cease at the outlet of the hollow or tube, which is enclosed with a net-work of blood vessels and lined with epithelium. The drops of water that are poured out on the lips come from the arborescent glands of those parts; others are situated in the cheek and on the tongue. The salivary glands are only arborescent glands of a large size and seated deeper in the tissues than those of the lips, cheeks, or tongue.

The sub-lingual, the sub-maxillary, and the parotid glands all belong to the arborescent division, and all secrete a transparent fluid which is very nearly pure water, and the amount of their excretion in the aggregate is quite large.

In addition to the fluids poured into the mouth by the follichlar glands,—the mucus, and the fluids secreted by the arborescent glands—the water, the mouth is supplied with moisture which exsudes directly through the walls of the vessels that abound in the mucous membrane just under the epithelium. This transudes in the same way as the fluid of the lungs is transuded which keeps those organs moist.

Much fluid is excreted into the mouth by the various means indicated as compared with the small amount of those fluids which are absorbed again from the mouth. But there are certain articles of the more rare and volatile character that seem to be readily absorbed from the mouth. Among these may be named alcohol, tobacco, onion, and other fancy articles. All the various fluids of the mouth combined, form what is termed the saliva.

THE PATHOLOGY OF THE FLUIDS OF THE MOUTH.

The Pathological conditions of the mouth that are directly connected with the fluids of the cavity, may be stated to be:—

Arrested secretion,

Acute Catarrh of the mouth, Chronic Catarrh of the mouth,

Excessive Formation of Epithelium,

Acute Inflammation,

Anæmia.

These various conditions may be present, either one alone and unaccompanied with any one of the others; or they may occur

two or more of them at the same time; or one condition may obtain in one part of the buccal cavity while another condition is observed in another part of the mouth.

ARRESTED SECRETION.—The secretions may be arrested from a defective supply of blood to the secretory organ, or from defective innervation of the organ or some one or more of its structures, which diminishes its secrecretory power.

In many forms of fever, where the blood is changed by a poison absorbed into it or formed within it; or in inflammation where the part inflamed yields a poison to the blood and thus poisons that fluid; the tongue may have a darker color than natural, with a sticky and opaque epithelium, and become dry, or but imperfectly supplied with moisture; and if the mouth is left open but for a short time and the saliva is not carefully placed upon the tongue quite frequently, the breath as it passes dries up the moisture leaving the tongue quite dry and liable to fissures.

As the surface of the tongue becomes dried, the walls of the sub-epithelial capillaries crack, the blood, or at least the serious portion of its coses out, and drying upon its surface gives to the tongue a brown or reddish-brown coat.

The diminished secretion, at times,—when the blood has been poisoned as here indicated by fever or inflammation,—allows the fluid exsuded from the fissured capillaries to accumulate in quite large quantities; and if there is much of the red portion of the blood in it, it is tough, and when removed, comes off in flakes leaving the surface of the tongue red.

This redness and rawness of the tongue indicates that the fluids of the system are seriously poisoned, and the vitality of the mucous membrane so low that there is danger of its slonghing and forming ulcers quite difficult to heal. Especially will there be great danger indicated if the patient has taken mercurials or antimonials or any other medicines tending to depress the vitality of the organism.

The *Treatment* for arrested secretion of the fluids of the mouth, when caused by a poisoned condition of the blood, must be governed by the knowledge that this poisoned state of the fluids seldom continues long, for as the disease runs its course unem-

barrassed it tends to a speedy termination, as small pox and measles tend to a speedy termination.

While the arrest of the secretion lasts, but very little of the ordinary foods can be absorbed. Amylaceous foods, which require to be acted on by the saliva, not meeting with the required fluid are hence not prepared for absorption and nourishment of the patient. But albumenoid foods, where the albumen is properly suspended in a sufficiently large quantity of water that the water may take the place in the stomach of the fluids usually furnished that viscus by the mouth, can be absorbed into the system and serve as nutrition. Hence beef-tea, broth, soup, and other solutions of animal food are far the best in those conditions of the system where the tongue is dry, and dark, fissured. little gelatinous matter, or even a solution of gum or mucillage, taken in the mouth, may serve to shield and protect the dry and exposed mucus surfaces; but such solutions retard absorption and should never be taken in more than quite small quantities at a time. Whatever animal food is given should be suspended in plenty of water when there are indications from the tongue that the esophagus or stomach are lined with a superabundance of epithelial scales, for those epithelial scales will absorb a considerable portion of the water. But if the stomach is raw and has a surface unprotected by the epithelium, the food should contain less water and be boiled until it is almost or quite a jelly.

As this condition of arrested secretion is usually but of short duration and tends to recovery, proper care in regard to food is of more importance than in regard to the special medicines used.

Stimulants of a permanent character, and especially those that act specifically on the mucous membrane, will aid to restore the arrested secretions of the mouth. The tincture of xanthoxylum berries appears to be specially valuable. The alcohol of the tincture has a tendency to prevent destructive change in the tissues, while it and the prickly ash both rouse the nervous energy and the glandular activity of the parts. Sugar also has a preservative power, and as it is changed to lactic acid in the stomach, it aids digestion when given in proper quantities and at proper intervals.

Malt liquors, wine and brandy are of late years being consider-

ed almost indispensable in this condition of the system. Tonics, as chamomile flowers, hydrastis Canadensis root, gentian, quassia, and other bitters, have a direct tendency to arrest the degenerative changes of the tissues, and thus check the ravage of the diseases.

BOOKS PERIODICALS, ETC.,

BY THE EDITOR.

Once more I have to announce the fact that less books relating to medical science have been published during the last month than usually appear at this season of the year. Two or three are on the way west, but are not here in season for the present notice.

An Elementary Anatomy and Physiology, for Colleges, Academies, and other Schools; from the pens of Dr. Edward Hitchcock, President of Amherst College, and his son Dr. Edward Hitchcock, jr., has been published by Ivison, Phinney & Co., of New York.

This differs from the many works already published as text books and popular treatises, by having a fuller and a more ample reference to the discoveries of the microscope in the science of anatomy, and by constant reference to comparative anatomy of animals, as well as an unusual number of illustrative cuts explanatory of subjects not always otherwise made to be clearly understood.

It appears to be admirably adapted to fulfill its design; and it or some similar work should be in every family.

J. H. McChesney has sent me his Description of New Species of Fossils from the Palæozoc rocks of the Western States, noticed at a meeting of the Chicago Academy of Sciences last October. It is an admirable contribution to science, and evinces talent, research, and industry on the part of the author of no mean order.

Prof. Usher Parsons has favored me with Vol. I. of the transactions of the Rhode Island Medical Society, containing his Sketches of Rhode Island Physicians, deceased prior to 1850.

Probably no man in the State is more capable of family him.

Probably no man in the State is more capable of furnishing

historical sketches of the physicians of the state than Prof. Parsons, and he has given a brief, but in many regards, a deeply interesting and very valuable history of the profession in that state, which will increase in value and interest from year to year.

A more careful examination of The North American Journal of Homeopathy, since last month, has led me to note some things that appear well worthy of mention.

It is quite apparent that those best educated among the Homoopathists, care but little for many of the dogmas propounded by Hahnemann. Dr. J. C. Peters, the principle editor, a man of good mind, extensive research, and large experience says:—

"The intentions of Hahnemann were philanthropic and honest, and his aim was a truly noble one; but as he experimented upon the healthy human subject only, his 'Materia Medica Pura' necessarily contains mainly the details of functional derangements and symptoms; in point of fact, it does contain an unexampled host of isolated and often very trivial drug symptoms.

But from what internal morbid, functional, structural, or chemical changes they flowed, or to which they pointed, remained either nearly unknown to, or could only be darkly and uncertainly guessed at by him.

* * * * *

"We forbear to enter more minutely here into the difficulties of treating disease with no other guide than the Materia Medica Pura; and, although we honestly think that the homeopathic method offers, even in its present condition, an excellent method of curing many diseases, yet experience teaches us that its application is always laborious, frequently uncertain, and often utterly impracticable."

But it is not possible to convey clearly in a brief space the reasons which have led to the adoption of the views advanced by Dr. Peters. The entire article is eminently worthy of a careful perusal.

RUPTURE OF THE DUCTUS COMMUNIS CHOLEDOCHUS.

BY W. B. PARKER, M. D.

According to my promise, I give you briefly the history of the case of rupture of the common duet, and the subsequent examin-

ation. During my stay in Kelloggsville, I called at a harness maker's shop, February 9th. I there saw the patient for the first time:-he was at work at his trade, (harness making;) he complained of a cramp-like pain in the gastric region, and wanted to know of me what it indicated. By his description I concluded it to be of a nervous character and told him so. The pain would leave him when he left his work, and recur on his resuming it again. I did not make any prescription for him as he thought he did not need any. I heard nothing more from him until the Tuesday following, when I heard that he had had the night before, a severe attack of the same cramp-like pain, but more intense and lancinating. It, (the pain) would leave him in a short time then recur with greater violence. He called on a Botanic or Eclectic practitioner, who called the disease at first spasmodic jaundice; a short time afterwards he called it enteritis: but another change came over him, and he called it bilious colic. His treatment was first an emetic, which increased the patient's misery.

This was on Monday. Tuesday morning cathartics were administered with no good effect. Pain increased and spread over the abdomen. In the after part of the day croton oil was given in connection with senna injections. An evacuation was at last produced, but the patient grew worse. In the evening I called to see him, and found him laboring under an attack of acute peritonitis. The symptoms were all well marked with one exception, and that was an absence of pain, or rather no increase of pain on pressure over the abdomen, but there was a cause for that as dissection subsequently showed:--there was about an inch of adipose tissue between the integuments and muscles of the abdomen. There was one place that pressure would increase the pain, and that was just above the centre of the umbilical region; and in that place a hernia was found, but it never could, under ordinary circumstances, become strangulated, as the neck of the sac was as large as the sac itself. Tuesday night at the hour of twelve the patient died, after an illness of twenty-eight hours.

The examination was made eight hours after death. We first found an old umbilical hernia as I have before stated. The peritoneal cavity was filled with serum. The intestines were everywhere agglutinated together, and covered with pus. There were also on their

surfaces gangrenous patches. The cocum was inflamed over its whole surface and covered with pus and bile. The ascending portion of the colon presented the same appearance. also a very offensive odor (that of putrid bile) on cutting into the cavity of the abdomen. The omentum was hard and brittle, breaking like brittle wood. It was also very much thickened. Its surface was covered with a calcareous matter, which turned the edge of the scalpel as if it were drawn across a stone. right lobe of the liver was enlarged, indurated, and very dark' colored, nearly black. It was adherent to the diaphragm, ribs, and the duodenum; the adhesions to the latter had been torn up, and had involved the common duct which was torn across about half way between the union of the hepatic and cystic ducts and its entrance into the duodenum. Left lobe of the liver natural in size, and healthy. Spleen enlarged, stomach Right kidney natural, left enlarged. Pancreas not ex-Mesenteric glands were enlarged, and felt as though they contained tuberculous matter. The coats of the urinary bladder thickened and indurated. The gall bladder was empty, its contents had escaped into the cavity of the peritoneum and had produced excessive inflammation. The adhesions of the right lobe of liver were of long standing and probably would not have been torn up had not the patient gone to work at his trade after doing nothing for some time previous to his coming to Kelloggsville. He had been there but three or four days previous to his illness.

I think his illness was caused by his raising his arms and thereby drawing on the muscles of the ribs, (the intercostals,) by the previous action of the pectoral muscles, which had a tendency to draw the liver up with the ribs, and thereby detatching the adhesions on the under side of that viscus. This was probably the first cause of the cramp-like pains of which he complained, and the emetic which he took probably occasioned the later trouble, that is, the laceration of the ductus communis choledochus, and thereby the patient's death.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

The action of the acetate of soda on the system is very similar to that of the acetate of potassa, only it is less active as a solvent. It, like the former, is given for the purpose of promoting the solution of solid matters in the system and aiding their elimination through the kidneys. The dose is from one scruple to one one drachm repeated four or six times a day.

ACETATE OF STEVENIA. This may be obtained by the direct combination of Strychnia with Acetic Acid. For its use in medi-

cine, see Strychnia.

ACETATE OF ZING. This is made by dissolving the Oxide of zinc in Acetic Acid and allowing the solution to evaporate and crystallize. In its action on the system generally is much like sulphate of the metal. Locally it acts mainly as an astringent, with some sedative power. Hence it may well take the place of the Acetate of Lead.

It is seldom used internally, although Devaux and Dejaer made use of it in large doses. Ordinarily it may not be given in more than one or two grain doses. 'As an emetic the dose is from ten

to twenty grains.

Topically it is a valuable eye-wash in ophthalmia, and also as an injection in gleet and leucorrhoea. As an injection in the later stages of gonorrhoea, Dr. William Henry and Sir A. Cooper bear testimony in its favor.

As a lotion or injection, the strength usually employed is one or

two grains to a fluid ounce of distilled water.

ACETATES. Salts in which Acetic Acid is united with a base.

Aceric Acid. An acid obtained from vinegar, and from pyroligneous acid. Glacial Acetic Acid crystallizes at 45° F. When the crystals of glacial acetic acid are dissolved in water, a liquid is formed which is called liquid acetic acid, which is the form in which it is used in medicine. The quantity of glacial acetic acid dissolved in the water determines the specific gravity of the solution. The strength of the solution can be determined by its specific gravity. Hence the Pharmacopeias direct as to the specific gravity of the liquid acetic acid which they consider officinal. The Edinburgh Pharmacopeia directs it of the specific gravity of not more than 1.065, and in another part of the work, not above 1.0685. The Acidum Aceticum of the London Pharmacopeia is of the specific gravity of 1.048. That of the U.S. Pharmacopia is 1.041.

Acetic Acid is a powerful Antiputrifactive, and is used for the purpose of preventing decomposition in vegetable and animal foods, and also to prevent decomposition of anatomical preparations and *material* for anatomical and surgical purposes. Impure

acetic acid obtained by destructive distillation of wood is a better Antiputrifactive than that obtained otherwise as it contains creo-

sote; but even vinegar is often used for these purposes.

Acetic acid is also an active Solvent. Liquid albumen is not coagulated by it, and coagulated albumen is readily dissolved by it. Fibrine, muscular or fibrous tissue, and the crassamentum of the blood are also dissolved by it. It readily dissolves gelatine and gelatinous substances. It dissolves a part of the corpuscles of blood. It does not dissolve casseine, but coagulates it.

On account of its great solvent power, strong acetic acid acts locally as a corrosive and destructive agent, producing death of the parts with which it is brought in contact, and proving a fatal

poison if applied in sufficient quantities to the stomach.

Applied to the skin it destroys the contractile force of the coats of the cutaneous blood vessels, allowing congestion and redness. To the nerves it acts as an irritant, causing a smarting or burning sensation. It destroys the vitality of the cuticle, and dissolves its connections with the tissues beneath; and by its action on the subcuticular vessels allows an exsudation from them, and thus it

produces vessication.

Internally, in large doses it acts as a solvent upon the stomach; and when absorbed it acts upon the system, or the parts with which it is brought in contact as too active a solvent to accord with the vital activity of the system, and hence produces pain in the stomach, convulsions, and perhaps death. In moderate quantities, it acts on the food to assist in its solution and digestion, and hence is frequently taken in conjunction with muscular fibre, and with the more tendinous portions of animals, as cold salt beef, cold ham, pig's feet, etc.

It also rapidly combines with the fatty portion of animal food, as well as the fatty tissues of the living body. It is often used in moderation with benefit, to dissolve food that is difficult of solution, and to keep it both while in the alimentary canal and in the circulatory fluids from putrifaction or a tendency thereto.

When habitually taken in considerable quantities, it produces leanness, or a diminution of the fatty, cellular, and fibrous tissues with an exhaustion or languor of the processes of digestion. For reducing obesity or a fulness of habit, it is often resorted to by young and thoughtless Misses. Portal relates a case of a young lady in the enjoyment of excellent health, with a good appetite, plump, blooming. Her mother was very fat and she feared to become like her. With the advice of an old woman, she drank a small glass of vinegar daily. Soon her plumpness diminished, to her great satisfaction. In about a month she had a cough, dry at first, but afterwards moist. Then came on a slow fever, with

difficulty of breathing. Her body was emaciated. She had night sweats, swelling of her feet and limbs, and a diarrhea terminated her life. On examination, her lungs were found filled with tubercles, produced by the engorgement of the lymphatic glands and glandules by the debris of the system, which the vinegar had dissolved, but which was not eliminated.

Long continued use of vinegar has induced chronic diseases of the gastro-intestinal mucous membrane, and scirrhus of the

pylorus and the rectum.

Notwithstanding the harmful results which follow the long-continued use of this agent, considerable can be taken at one time

without causing any immediate serious injury.

As a medicine, acetic acid, or vinegar, may be used for a variety of purposes. Taken internally, it acts in many regards as do other Acids, to allay heat, diminish febrile excitement, relieve thirst, etc. In hemorrhages of the nose, stomach, lungs, uterus, or bowels, it acts both as an Astringent and as an Acid, diminishing vascular excitement, and promoting the contraction of the vessels.

In phthisis pulmonalis, puerperal fever, and the eruptive fevers when of a malignant grade, in suppurations or the absorption of pus, and in all forms of disease tending to putrifaction of the fluids or solids, the proper amount of acetic acid or vinegar tends to prevent hectic by its Antiputrifactive power, and checks night sweats, hemorrhage, or diarrhea, by its Astringent property. In scurvy it has been found beneficial.

Locally, it may be applied to the skin to cure various forms of skin diseases, and particularly porrigo. Strong acetic acid will remove warts and corns. It has been found very beneficial, properly diluted, as an enema to provoke alvine evacuations in constipation, and to destroy the Ascarius Vermicularis, or small

round worm, as well as to check hemorrhage.

As an Antiputrifactive it is useful to be employed diluted and locally in ill-conditioned ulcers, and especially in gangrene or a tendency to gangrene. In ulcerations of the ear, mouth, or throat, in scarlatina and angina, it is an excellent gargle. In various forms of ophthalmia, and especially for removing lime dust or plaster from the eye, it has been found useful.

As an antidote to an over dose of any of the Alkalies or their carbonates, it answers a good purpose. It may be used where the urine contains phosphates, or there are phosphatic calculi or

gravel in the bladder.

It is used as a lotion or fomentation in bruises, sprains, or hurts, both to prevent the structures from putrifying and to dissolve the inflammatory and other exsudation which causes the swelling, lameness, and pain.

The dose is from five to ten drops of the liquid acid, well diluted. It is seldom that pure Acetic Acid is used in medicine, but Distilled Vinegar or Pyroligneous Acid is used in its stead.

ACETIC ETHER. This may be prepared in a variety of ways but is not much in use. It is sometimes employed externally to relieve rheumatic pains.

ACETOSA RUMEX. Common Sorrel.

Acetosella Oxalis. Common Wood-sorrel.

ACETUM. Vinegar. This is usually obtained by causing liquors which are susceptible of undergoing the vinous fermentation, to undergo another fermentation called the acetous fermentation, by which acetic acid is formed, and is in the liquid in combination with many other substances. For the action of vinegar on the system, see Acida, and Acetic Acid.

ACETUM LIGNEUM. Pyroligneous acid.

ACHIAS SAPOTA. A fruit tree of South America.

ACIDA. An order of medicines, of the Class *Hamatica*, and of the Divisions *Restaurantia* and *Dissolventia*.

Acros. Under the name of Acids, in my Classification of Materia Medica, are included those acids only whose acid actions, chemically speaking, are their most marked manifestation when taken into the system; as, Lactic Acid, Citric Acid, Lemon juice, Mallic Acid, Acetic Acid, Vinegar, and Tartaric Acid. These all, by the addition of oxygen and water, which they find in the blood, are capable of being converted into Carbonic acid in the system, and escaping thence in the form of Carbonic acid gas. By this arrangement, many of the vegetable acids, as tannic, gallic, hydrocyanic, benzoic, and oxalic, are exduded from the Acida; not because they are not possessed of acid properties when in the system, for they do induce acid actions and reactions; but because they have other and more marked medicinal forces which give to them their individual characteristics. For the same reason, most of the mineral acids are not ranked in this Order in my classification. These agents undergo very nearly the same chemical reactions in the human system that they do in chemist's retort, or entirely uninfluenced by presence of the vital forces.

Although the blood of living animals is always alkaline, yet certain acids may always be found in the healthy blood. These acids are naturally there in certain quantities, and if by any means the proper amount should not be present, the health of the individual would suffer from its absence. If this deficiency exists, the necessary acid should be given to restore the equilibrium, and when thus given, acids are strictly restorative in their action, and are properly classed with the Restoratives. When, how-

ever, there is already in the blood the normal amount of of acids, but the fluid contains an excess of the alkalies, the administration of an acid would lead to its absorption into the blood where it would unite with and neutralize the alkali forming a neutral compound which might pass out of the system along with the excretions.

By uniting thus with an alkali, acids prevent the alkali from forming a destructive chemical combination with the tissues which would lead to a solution and wasting away of those tissues.

This action of the acids is strictly Catheretic.

As has been remarked, the presence of acids in the blood is not unnatural, for in that fluid we find some of the mineral acids as well as some vegetable acids which are analogous to lactic acid. These acids, however, are never present in sufficient quantities to neutralize the alkalies also present, which are always in excess so

as to give to that fluid a marked alkaline reaction.

It should be borne in mind, that although acids may combine with the alkalies present in the blood, the action of acids on the system differs widely from that of the salts which result from the combination of the two agents. This would seem to prove that the opinion advanced by many in high authority,—that the acids are neutralized by the few alkaline matters found in the saliva, the bile, and the pancreatic juice,—must be erroneous. If we remember that these secretions are but slightly alkaline if not absolutely neutral, and that the acid when it arrives at the stomach comes in contact with a surface which while it rapidly absorbs the fluid contents of the stomach at the same time secretes an acid, and not as is the case in other parts of the alimentary canal, an alkaline fluid, we must infer that so much of the acid as passes into the blood through the walls of the stomach must enter that fluid as still an acid and not neutralized by combining with an alkali.

In the blood there is always present soda, and usually potassa, in the form of a carbonate or phosphate, which, however, although combined with carbonic or sulphuric acid, is still markedly alkaline; and the acid taken as medicine combines with the alkalies in the blood, and not, as is sometimes stated, before entering the circulating fluid. Sometimes, when the amount of these neutral salts is not equal to the normal standard, the acid, after combining with the alkali or the alkaline carbonate or phosphate, forms a neutral salt which is retained in the system to supply the deficiency. It is in this way that an acid acts as a Restorative when

there is a proportionate excess of alkali in the blood.

When there is a tendency to phosphatic deposits from a deficiency of the acids, the base of the phosphates, as lime, or soda, may be made soluble by administering the vegetable acids which

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have a stronger affinity for the alkali than the phosphoric acid has, and will supplant and take the place of that acid. In this way the lime or soda which would have been deposited about the joints or in the bladder in the form of gravel or calculi, will still be retained in the system to subserve useful purposes, if it be not in excess; but if it be in excess, it will, as it is in solution, be carried out of the system, probably through the kidneys.

Both the mineral and the vegetable acids will act in the man-The vegetable acids whether free or in combination ner detailed. are good diuretics, and they or the resultant salts can usually be readily detected in the urine. The mineral acids, when free, are Astringents; and although they may be detected in the urine. they do not tend to increase the secretion of the renal bodies. When, however, they are combined with some of the alkalies, their medicinal character is changed so as to partake more of the nature of the bases to which they are united. They may unite with the urea of the urine, causing a deposit of uric acid. action of acids on the secretion of urine is not as powerful or as permanent as that of alkalies, and they are not to be relied on as diuretics. As the urine is liable to great variations of quality and amount in a state of health, proper caution should be observed ed in testing it in order to decide whether acids or alkalies are demanded to maintain a healthy equilibrium.

As the gastric juice is always acid, and may tend when it passes into the blood to lessen the alkalinity of that fluid, we find if it be retained in the stomach along with the recently taken meal, the blood is more alkaline at that than at other times, and the urine which is excreted just after meals is more alkaline than the normal stan-As the acid of the gastric juice passes into the blood along with the digested meal, or is absorbed through the coats of the stomach, it neutralizes a part of the alkalinity of the blood; and when a considerable space of time has elapsed since a meal, the blood is found to possess less than the normal amount of alkalinity. If these facts are not borne in mind when the urine is tested, erroneous conclusions may be arrived at which will lead to an injudicious or hurtful medication. The value of acids in cases of phosphatic deposits after petechial fevers, and where the nervous systems are laboring under disease, so as to waste those tissues which furnish the phosphorus for the formation of phosphoric acid, may be manifested by their acting as a corrective of the blood, to prevent phosphatic deposits; or it may be manifested by producing a solution, as has been explained, after the deposit has been formed.

[To be Continued.]

DROPSY.

Dr. John G. Rademacher says of this disease, that he does not consider diarrheea by any means a positive indication that the disease has become incurable; for it is frequently observed that this symptom follows organic affections that are curable. But when dropsy is a sequel of a chronic affection of an organ, and diarheea supervenes, there can be but little hope that treatment will prevent a fatal termination.

When dropsy follows an old organic difficulty, drastic purgation is almost certainly harmful, and tapping promises but little. If, in such cases the urine is clear, pale, normal in quantity, and yet the water in the effusion is not reduced, the indications are by no means encouraging.

In his younger days, Dr. Rademacher frequently resorted to tapping, but after he changed his mode of treatment, he seldom or never resorted to it.

He says:—"Two years since I attended a man for ascites, who had already been treated by diverse means. I told the patient that a cure by any method of treatment was impossible; and as he suffered but little, I declined to tap him, as I was of the opinion the operation would hasten a fatal termination. As the patient insisted on being tapped, another physician was called who performed the operation; but he died four days thereafter."

Anodyne Linment in Otitis.—M. Trosseau recommends a mixture of the alcoholic extract of belladonna in water, with glycerine; a cotton ball, soaked in the mixture, to be placed in the external auditory canal.

Chloroform.—M. Baudens, in his account of the campaign in the East, asserts that, although chloroform had been employed 20,000 times in the French army there, no fatal accident had ever resulted from its use. Dr. Rizet, of the Chasseurs, denies this. Two deaths occurred under his own observation; one at the Hospital Ramitchifflic, and another at Gulhane. This denial clearly takes away all value from M. Bauden's statement.—Medical Times and Gazette.

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FEVERS.—CLASSIFICATION.

BY THE EDITOR.

While the word fever is properly used to indicate all forms of disease of the corpuscles of blood where the chemical forces of the different ingredients naturally or artificially in the blood preponderate for the time over the vital forces, with a tendency to the death of the blood and its decomposition into its ultimate elements; the peculiar condition of the blood and particularly the influence of unnatural substances in that fluid, produces peculiar torms of fever corresponding to the peculiar cause producing the disease.

Fevers are naturally classified in accordance with the varieties of their producing causes; and it has been found that each variety of cause produces a variety of symptoms and results demanding for each variety its own peculiar mode of treatment.

Without in this connection indicating except briefly, the apparent causes of the different forms of fever; I think it advisable to present a grouping of the various forms of fevers recognized by scientific observers, each of which will be considered in its proper place.

- 1.—CONTINUED FEVERS.
 - a. Typhus, caused by a specific poison generated by haman beings in over-crowded and unventillated spaces, and propogated by infection.
 - b. Enteric, sometimes called Typhoid, generated by dying and decaying green vegetable matter in a peculiar state of decomposition, and propogated by infection.
 - c. Relapsing, caused by famine, starvation, or destitution with improper and deficient nutrition, and propagated, but not readily by infection.

- d. Febricula, or Simple fever, caused by exposure and fatigue, or exhaustion of vital force, and by surfeit. It is non-specific, and non-infectious or contagious.
- e. Plague, sometimes called Black Death, and sometimes Pestes. The cause is undetermined. It is epidemic, and perhaps contagious and infectious.
- f. Typhus Serebro-Spinalis, sometimes called Spotted Fever; and has been ranked among the Eruptive fevers. The cause is unknown. It is epidimic, but probably not contagious.

Not unfrequently several of these different causes of fever are acting upon the patient at the same time; and hence a complication or combination of different forms of fever in varying degrees are not infrequent, rendering it difficult if not impossible to place a given case properly under any one of the forms or varieties named.

- 2.—Intermittent Fevers.
 - a. Quotidian,
 - b. Tertian,
 - c. Quartian: all caused essentially by the introduction into the blood of a miasm generated by the decomposition of dead vegetable matter acted upon by heat, moisture, and particularly by the atmosphere; and assuming their different varieties from the condition of the system of the patient, and not from any peculiarity of the producing cause.
- 3.—REMITTENT FEVERS.
 - a. Simple Remittent, sometimes called Billious fever, caused by the miasm that produces Intermittent fever or Ague, complicated with an increased derangement of the liver, and a consequent want of bile in the bowels and blood.
 - b. Yellow Fever, caused by miasm generated by the decomposition of organic matter under a high heat, with moisture and exposure to the atmosphere. Perhaps a more severe form of Simple Remittent fever. Only met with where dead and decaying organic matter is exposed to a very high temperature.

What was said in regard to the commingling of causes and

effects under continued fevers, is eminently true in regard to fevers of a miasmatic origin. Not only are the different varieties sometimes rendered obscure and difficult of determination, but they are often farther complicated by the addition of those causes that produce the continued fevers; and hence there will be not only a modification of the form of the disease, rendering it almost impossible ever to meet with a case of uncomplicated continued fever in miasmatic regions which complications demand a corresponding modification in regard to the treatment adopted.

4. ERUPTIVE FEVERS.

a. Chicken Pox, an unimportant disease, caused by the introduction into the system of the virus peculiar to the disease. Contagious and infectious.

b. Measele, caused by the introduction into the system its own peculiar virus. Infectious and epidemic. Can be propogated by inoculation with the saliva.

c. Cow-Pow, apparently a modification of Small-pox, caused by inoculation with vaccine virus.

d. Scarlet Fever, caused by the introduction into the system, or by the generation within the blood, of its own peculiar

poison. Epidemic, and infectious.

e. Small-Pox, caused by the introduction into the system of the peculiar virus of this disease. Peculiarly infections and contagious.

f. Varioloid, Small-pox, modified by the patient's system having been previously acted upon by vaccination. In reality, Small-pox modified.

5. INFLAMMATORY FEVERS.

- **4.** Milliary Fever, a child-bed fever, produced by the absorption of matter that should have been excreted in the lochia.
- b. Milk Fever, occuring at the time the milk first flows into the breasts after child-birth. The cause is not clearly understood.
- c. Puerperal Fever, caused by the absorption of matter or virus produced by the inflammation of Erysipilas, or from other cases of puerperal fever. Eminently infectious and contagious.

- d. Hectic Fever, caused by the absorption of pus from a softened turbercle, or pus from any part of the system. Traumatic Fever and hectic appear to be identical. A modified form of this fever is quite common after the formation of pus in Small-pox, as pus is being absorbed from the pestules.
- e. Mercurial Fever, caused by the medicine having induced a depression of the vital force of some organ, or of the corpuscles of the blood, so that degenerative chemical changes commence.

All forms of inflammation, if the local disease produces considerable derangement of the organ affected, are likely to produce febrile symptoms; and the febrile derangements are so marked at times as to have caused local inflammations to be designated as fevers. Hence it is by no means uncommon for physicians to speak of Brain fever, Lung fever, Rheumatic fever, etc. And yet those who use these terms are fully aware that the primary derangement of the system was a local inflammation, and that the febrile symptoms manifested were caused entirely by the local inflammation.

In the treatment of these local diseases, but very little attention should be paid to the general disturbance farther than to control the inordinate activity of the circulation by the use of such sedatives as act specially upon the heart and arteries.

It should be borne in mind, that the blood circulates through all parts of the system and that hence, there can be no extensive or severe inflammation of any organ without that inflammation being liable to produce a change in the blood as it flows through the diseased organ, and thus causing fever.

Neither can the blood be considerably diseased without the liability to produce disease or inflammation in one or more organs of the body. Thus, often-times, fever and inflammation are frequently dependant on each other as causes. But while thus intimately related to each other as cause or effect, it should never be forgotten that they are radically distinct from each other, and this radical difference demands a similar distinct mode of treatment.

PERITONITIS.

BY C. HARLEY, M. D.

The peritoneum as a distinct membrane is liable to take on inflammation even when that disease does not appear as the result of inflammation of the neighboring organs. But the peritoneum is also quite liable to serious and painful inflammation as the result of disease of the organs which it covers, or as the result of mechanical or surgical injury. When not produced by mechanical injury this disease may assume either an acute or chronic form.

The Symptoms of Acute peritonitis are:—It is sometimes ushered in with chilliness, or even distinct rigors, accompanied with a great feeling of weakness, and pain, at first confined to the region first affected, but ere long extending over the whole abdomen; tenderness with increase of pain on pressure, the pain being quite sharp and sure to be felt wherever any of the muscles of the abdominal parieties press; even the ordinary pressure of the bed clothes may become insupportable. The patient lies quietly on his back, and the knees are bent and the legs drawn up so as to relax the abdominal musecles as much as possible. The abdomen is hot, tense, and frequently tympanitic. The bowels are usually constipated; nausea and even vomiting may be present; the skin is usually quite dry; the pulse quick but weak; the tongue furred; and the countenance indicating suffering and anxiety.

The *Chronic* form of this disease sometimes is quite insidious in its approach, and usually it appears as a sequel of some ther former disease, as diarrheea, dysentery, enteric or typhoid fever, or measels. It presents the usual symptoms of acute peritonitis only they are far less marked and noticable, except the tympanitis which appears at times the principle cause of distress; and the effusion into the peritonal cavity is at times very copious.

Puerperal Peritonitis, and that form produced by inflammation of the bladder, or by a surgical operation, will be spoken of hereafter and at present need but be alluded to.

The usual Causes of peritonitis are cold and damp, or inflammation of the stomach, or bowels, or liver, or ovaries; strangulation of a hernial tumor, the causes alluded to in the last paragraph, and the contamination of the blood by morbid poisons, and particularly with the poison of erysipelas. The chronic form of this disease has been supposed to owe its origin, frequently, to

tuberculosis of the lungs, and perhaps also of the peritoneum itself.

In regard to the *Treatment* of peritonitis, Dr. Volz says,—"The use of calomel and other laxatives is quite eommon but very unfortunate." Opium must be given even in large doses in the acute form of the disease. Tanner says that opium is invaluable in the treatment of this disease, and should be given in grain doses every three or four hours until the pain is relieved; and he believes that by it only can the life of the patient be saved.

Dr. T. C. Miller says that opium should be given in this disease, and certainly in large doses, as it is not dangerous, and does not produce bad consequences. He proposes to give it in half-grain doses repeated every half hour, every hour, or every two hours in accordance with the severity of the disease. Volz says that narcotism seldom occurs, and the bowels have fluid discharges even after the patient has taken from four to six grains of opium.

In combination with the use of opium Dr. Miller gives an oil emulsion with small doses of the nitrate of soda, and tincture of gelseminum. When the bowels are constipated he gives castor oil with the emulsion. Active purgation especially with those agents that produce griping or much peristaltic action of the bowels, must do harm. All forms of depletion must be avoided. Absolute quiet must be enjoined, as it is very essential.

Externally, hot formentations, made by moistening a napkin with an infusion of arnica flowers and chamomile flowers, constantly and sedulously applied, will be found of very great value.

The *Diet* at first should be of a mild and easily digestible character, and mostly taken in the fluid form. When the fluids of the system become affected the diet should be of strong beeftea with wine or brandy.

The treatment of the *Chronic* form of the disease must be conducted on the same principles that govern the treatment of the acute form, keeping always in view the fact that struma or tuberculosis of the peritoneum may be the cause of the inflammation.

lodine, iodide of potassium, and perhaps cod liver oil, given internally may do good. With the use of stimulating washes, or washes of a solution of iodide of potassium and the tinctures of arnica and conium, frequently applied to the abdomen; and a

mild but nourishing diet, careful exposure to sunlight and air; and other remedies as indicated, the patient may improve; but the chronic form of peretonitis will be found quite difficult of cure.

Dr. Habershon thinks that the benefit sometimes ascribed to mercury in the treatment of peritonitis, is by no means established; but that it is the opium given in connection with the mercury which does the good. Dr. Copeland says that ninety nine cases in the hundred of tympanitis, the disease is produced from some former one. But in children it may be idiopathic. When tymuanitis complicates the disease, whatever may have been its producing cause, the oil of turpentine, applied externally to the abdomen, almost always produces favorable results.

Peritonitis is a common accompaniment of strangulated hernia and acute displacement of the uterus; but it usually subsides readily on the relief of the originating difficulty. It requires, if the inflammation is considerable, the internal use of opium and arnica, and external applications of the tinctures of arnica, aconite, conium, and perhaps the addition of aqua ammonia. The mixture should be properly diluted with water, and the abdomen bathed freely and often; and if the heat is considerable, a cloth wet with the wash may be kept spread over the region of the disease. The disease, when caused by inflammation of the womb after child-birth, sometimes called Puerperal fever, will be greatly modified by the peculiar condition of the uterus and the blood, and the treatment will be considered when speaking of that disorder.

If the cavity of the abdomen is laid open, as in *Ovariotomy* or the *Ceaserian* operation, or by an accident,—the exposure of the peritoneum to the air, and to contact with the hands, and particularly to the corrosive effects of the pus and other inflammatory exsudations add, greatly to its severity and danger; and nothing has been found of equal value to shield the membrane against these hurtful agencies, to the *Artificial Serum* devised by Prof. E. R. Peaslee. Artificial senum is designed to represent pretty nearly the natural secretion, and is made as follows:—

R Water, (pure,) Oiv, White of Eggs, f3vj, Common Salt, 3ss. This is to be kept blood warm, and into it the hands of the operator must be plunged to lubricate them, before they are brought in contact with the peritoneum.

The use of this preparation I consider one of the most important steps in the progress of operative surgery which has been recorded during the past few years, for it is equally applicable to operations involving other serous cavities as in that of the abdomen. I would suggest its use in paracentisis thorasis, as well as in operations opening synovial cavities, not only when the operation is being performed, but afterward, as long as the opening continues.

Not only is it of use to lubricate the part, but also for washing out the abnormal secretions which are the results of inflammation and decomposition.

In regard to its use in a case where ovariotomy had been performed, Dr. Peaslee said:--"There could be no doubt that a fluid similar to the natural serous secretion must be less mischievous than any fluid in a state of decomposition. It was equally clear, that if two or three pints of this were injected, and the same quantity of fluid then withdrawn, the fluid still remaining after this operation, must be less mischevious, because less concentrated, than before. This expedient was therefore adopted when the state of the patient seemed to demand it, with a feeling of assurance of a beneficial result. And it was delightful to see how the patient was at once relieved, for the time, by every injection. I do not think she would have lived forty-eight hours from the time when the first injection was resorted to, had not some method been devised to remove the putrefying contents of the peritoneal cavity; and so long as they continued feetid and the patient threatened again to relapse into a typhoid state, I consider them to have been indispensable. The peritoneal cavity was injected ten times in all."

When the fluids resulting from an operation or hurt are properly diluted and withdrawn, as they may readily be by using a flexible tube as a syphon, traumatic peritonitis becomes very much like the simple acute form of the disease, and in most regards may be treated accordingly.

NITRATE OF SODA.

BY T. C. MILLER, M. D.

NTRATE OF SODA is found in the natural combination and in inexhaustible quantities in the desert of Atacama, and in the region lying on the boundary line between Chili and Peru, and hence has been called Chili Saltpetre. It is also found in western and southern Africa, and in many other countries.

To prepare it to be used in medicine it requires to be purified from the natural salt, or as usually the case, it is formed artificially by the solution of soda in water with nitric acid, and then by evaporating the water and the formation of crystals of nitrate of soda.

When pure, this salt is colorless, crystalizing in rhomboidal prisms, and of a sharp, cooling, and somewhat bitter, but not disagreeable taste. It attracts moisture slightly from the air; dissolves in from two to three parts of cold, and in one part of warm water. It is composed of one atom each of soda and of nitric acid.

Nitrate of soda passes unaltered into the blood. Læffler gave it to the extent of from one to four drachms daily, for from eight to twelve days, to five healthy persons, and observed it to produce the following symptoms:—

It produced a feeling of general debility, a lack of mental and bodily activity, lassitude on slight exertion, with painful soreness of the muscles and joints. The pulse sank to fifty, and even to forty beats in a minute, and became weak and soft. The face became pale and lean, and the wounds caused by venesection became slow to heal. The bowels remained unchanged, but the quantity of urine was considerably increased, and the perspiration became as great as in midsummer.

The blood underwent the following changes, as proved by careful tests:—

The color and density was changed so that it resembled the expressed juice of cherries.

The number and volume of the colorless corpuscles was increased.

The color of the red corpuscles became fainter.

The blood coagulated more readily than natural.

The blood became proportionately more watery.

The serum was increased. Nitrate of Soda acts directly on the blood as here indicated.

In its action on the system, nitrate of soda is much milder than nitrate of potassa, but is very similar in manner. A knowledge of the action of each alkali on the organism is necessary to guide us in their use.

According to Zimmerman, nitrate of soda does not dissolve the fibrine but slightly, if any, but it does produce a shriveling up of the corpuscles. Saltpetre or nitrate of potassa readily dissolves fibrine and many other matters, and hence in various forms of disease, and particularly in gastritis, Zimmerman gave preference to the soda salt.

It is far less liable to irritate the stomach than nitrate of potassa, especially if there is any inflammation of that viscus, and it lessens the abnormal secretions.

Paracelsus was acquainted with the existence of this salt; but it was not used as a medicine until the attention of the profession was called to it by Dr. J. G. Rademacher. He spoke highly of it in remittent, gastric, and billious fevers,—in angina, pleuritis, scarlatina, small-pox, diarrhea, dysentery, cough, bronchitis, asthma, hysteria, rheumatism, erysipelas, glossitis, laryngitis, croup, and other forms of disease connected with or producing an accumulation of effete material in the blood, and suppression of perspiration.

Velson, Meyer, Bonorden, Richter, Facklemann, and others, laud its use in dysentery.

Layman speaks of it as an excellent remedy in toothache (even when caused by caries,) facial neuralgia, local rheumatism, bronchitis, pleuritis, pneumonia, and lumbago, all diseases complicated a retention of some of the excretions.

Prof. Marsell Frank speaks favorably of it in most inflammatory and febrile conditions. Profs. Wunderlich and Schnitzler speak of it as particularly valuable in scarlet fever; and Prof. Shoenleim in enteritis mucosa.

Nitrate of Soda is officinal in most of the Pharmacopœias of Germany, where it takes the place of nitrate of potassa.

It is given in solution to the extent of from half an ounce to one and a half ounces daily, dissolved in several fluid ounces of water. If the stomach is very acid, it may be well first to give some calcined magnesia.

GASTRO-ENTERITIS.

BY T. C. MILLER, M. D.

In speaking of this form of disease, reference is had to that form of inflammation which not seldom is met with, where both the stomach and the intestines are affected, either primarily, or in consequence of some primary disease producing inflammation.

The gastro-enteric inflammation varies considerably in different cases both as to the locality and extent, as well as the severity with which it is manifested. But however produced, or in whatever manner manifested, it is always a disease of considerable importance. Brousais and his disciples magnified the importance and frequency of this disease very greatly; and yet others have strangely almost entirely overlooked it.

If we take into consideration the importance of the functions of the stomach and intestines, and their very intimate relations to the fevers, we must conclude that irritation or a state of actual inflammation of those organs, must have a very great influence on the remainder of the organism, and upon the life of the patient. Particularly must that be the case where the disease attacks infants and children, whose nervous systems at such early ages are specially liable to be greatly affected by disease of the stomach or bowels.

The diseases of infancy and childhood resulting from the impressibility of the nerves at that time, and derangements of the digestive organs,—are manifold, frequent, and dangerous. And also later in life, when the indications of the presence of the disease are not so clear as in infancy, gastro-enteritis often is present, and not seldom is attended with no small amount of danger.

Derangements of the digestive organs produce disturbances of the cerebro-spinal nervous system, the organs of respiration, the heart, the liver, and the skin; and although the intestinal disease is often the result of other affections, or occurs at the same time, yet it is far more common for such derangements to show themselves either as the cause, or as the result of other diseases.

We should remember that affections of the brain or spinal marrow are frequently complicated with derangements of the alimentary canal. Sometimes the affection of the nervous centres cause derangements of the digestive organs, but far more

frequently the derangements of the organs of digestion are the primary departures from health. This is particularly the case with infants; yet in adults, even a slight affection of the stomach will frequently produce headach, dizziness, somnolency, and inability for mental exertion.

Epilepsy in adults, and convulsions in children, sometimes depends upon some disease in the digestive organs: and this fact is so well established as to be recognized by all scientific physicians. So also is it known that sometimes inflammation of the stomach and intestinal canal is associated with inflammation of the membrane covering the brain, the substance of the brain, or with acute hydrocephalus; and that this complication may veil the real nature of the disease and render diagnosis difficult.

Perhaps most of the cases which are termed spinal irritation, are connected with sub-acute inflammation of the stomach and intestines, which has either produced the tenderness and inflammation of spinal nerves, or is produced by the primary nervous disease.

Certainly it is of very great importance to clearly understand these pathological relations, and as far as possible determine which has been the primary disease and the one on which the other depends, that we may direct our efforts against it and thus remove all the disease as we correct or remove the cause.

Gastro-enteritis also appears in combination with disease of the organs of respiration far more frequently than is supposed by some. The complication of bronchitis, catarrh, and other affections of the organs of respiration, with gastro-enteritis, is well known to all close observers; and also that gastro-enteritis is the primary difficulty in many bronchial and pneumonic difficulties.

Gastro-catarrhal inflammation, or gastro-bronchial inflammation, is a not uncommon and quite dangerous affection to which children are liable to in hot weather. So is gastro-enteritis a frequent attendent on tubercular consumption; and when the gastric derangement is made worse by errors of diet, or by the medicine used, the pulmonic difficulty is always increased in severity. Even pneumonia, if of a nervous or depressed form, can be greatly agravated by derangements and depression of the digestive organs. The so-called stomach cough that accompanies the

disease produced by intestinal worms, and erroniously called by Dr. Phillips, phthises dyspeptica, shows clearly how irritation of the stomach and bowels may produce pulmonic disease. In pertussis, the mucous lining of the intestines are often more affected than the organs of respiration, and hence the vomiting that follows or preceeds the paroxysms of coughing.

Diagnosis.—In all cases where we have reason to fear that the lungs or brain are affected at the same time that there is gastro-intestinal inflammation, or that the cephalic or pulmonary symptoms are produced by the disease in the digestive organs; we must most cautiously determine the nature and extent of the intestinal lesion, and determine the location and amount of tenderness and pain in the epigastrium and abdomen; and particularly determine if pressure increases the pain or induces any sense of nausea, or causes any eructation of acid flatus. We must ascertain if there is occasional vomiting, and irregular discharge of the alvine evacuations, for these are all indications of the presence of gastro-enteritis.

In regard to the connection of gastro-enteritis with fevers, on which hypothesis Brousais based his pathology of fevers,—there can be no doubt that inflammation of the mucous coat of the digestive tube is a prominent and constant condition during the invasion of most forms of the exanthematous fevers. We can distinguish this inflamed condition of that membrane in the earlier stages of those diseases, by looking in the mouth and throat. We also find as the skin takes on inflammation, the disease of the mucous membrane recedes. This derangement of the stomach is what produces the nausea and vomiting, the tenderness at the epigastrium, as well as the redness of the fauces, the lining of the cheeks, and the edges of the tongue.

A somewhat similar condition is manifested in the earlier stages of typhus, and particularly in enteric fever; but in these diseases the inflammation at first appears more manifest in the stomach, and passes into the intestines later.

In debilitated and cachectic persons, who have the exanthematous fevers, and the exanthem does not become fully developed on the skin; or when the eruption has been delayed, or has receeded, the gastro-enteric difficulty is often the most dangerous part of the disease, and may lead to dangerous affections of the brain, as well as to diseases of the alimentary canal which are difficult of cure.

The connection of gastro-enteritis with affections of the liver, have been frequently observed and noted. Sometimes this complication has been supposed to be simply a disease of the liver, and sometimes simply a disease of the alimentary canal; and when thought to be a liver disease alone, and treated with mercurials and drastic purgatives, or with emetics, even fatal injury has resulted from the error. The connection of the intestines with the common gall duct, and through that with the gall bladder and the liver, makes it scarcely possible that the billiary passages can suffer from concretions or stopages without also causing disease of the intestine; and hence when the disease commences in the bile-ducts the intestines seldom escape being affected also.

Inflammation of the intestinal canal, if long continued, may produce hepatitis, as well as be produced by billiary derangements; and when the liver becomes inflamed, there can be no doubt that over by excitation of the bowels and stomach through the influence of irritating diet, but particularly through the influence of fat bacon, or alcoholic drinks, as well as through antimonials or mercurials used as medicines, very much harm may be done, and the hepatitis made chronic if not incurable. Pills or other forms of drastic purgatives,—as the frequent use of podophyllin, gamboge, colocynth, calomel, blue mass, and other irritating agents, in many cases have originated this disease and its complication of disease of the liver; and if resorted to after inflammation has commenced, almost if not quite always add to the gravity and complications of the malady.

That long continued gastro-enteritis produces disease of the mesenteric glands is a fact which many observations have verified. Notwithstanding the evident close connection of these diseases, not seldom is inflammation of the mesenteric glands treated by means of drastic purgatives, notwithstanding the enlargement or engorgement and obstruction of those glands can in most instances be readily shown to have been caused by the primary gastro-enteritis; and only by removing the primary derangement can the glandular difficulty be cured.

In the *Treatment* of this disease I have found a few grains of the nitrate of soda made into an emulsion with oil of sweet almonds, at a dose, and the dose repeated several times a day, very beneficial.

When there is also an affection of the lungs, the remedy to be chosen will need to be one that cannot increase either difficulty, while it may prove beneficial to both. The common use of hive syrup, or any form of the tartarized antimony, in diseases of childhood, has been productive of great harm; and it cannot be given to children laboring under the mildest form of gastroenteritis without causing an increase of the disease. Its use is fraught with positive danger to the life of the patient, as it not only adds to the gastro-intestinal inflammation, but produces dangerous depression of the vital forces through its sedative influence on the nerves, and thus hastens a fatal termination of the disease.

When the mesenteric glands are also involved, local, soothing, quieting, and cooling applications will be found of value. Cold alkaline solutions, as the bicarbonate of potassa dissolved in sufficient water that the solution shall not dissolve the cuticle, may be applied, covering the abdomen with but a single thickness of cloth. Ipecacuanha in small but frequent doses, with demulcents, will prove servicable. This with a careful attention to the diet will often subdue the inflammation both in the glands and in the mucous membrane.

When gastro-enteritis occurs in connection with a disease of the skin, (which is a frequent complication,) the skin difficulty often entirely obscures the intestinal derangement, and the treatment not being such as is demanded for the originating departure from health, the skin disease appears very obstinate of cure. Eczema, and other obstinate forms of skin disease are often combined with, if not the result of gastro-enteritis, which may be easily determined by pressure and the detection of tenderness in the epigastrium. In those cases, arsenic and other irritating agents increase the difficulty, but veratrum viride, soothing and cooling remedies, warm baths, and a careful light diet, readily subdue the malady that appeared very obstinate.

The main reason why the exanthems are so obstinate of cure at times, is owing to their being complicated with gastro-enteric inflammation, which difficulty has been overlooked by the physicians,—and the resultant neglect of proper attention to the diet and regimen, and particularly in allowing the patient to eat fat animal food and drink improper liquids, instead of giving proper attention to these important matters.

Chronic Gastro-Enteritis,—is often connected with diseases of the urinary and reproductive organs, as lencorrhoa, gout, etc., It also is frequently met with in cases of deficient menstruation.

In such cases, the gastro-enteric difficulty must be removed; and the treatment reccommended for the acute form will be applicable, combined with such means as are required for the relief of the complications.

PTELEA TRIFOLIATA.

BY J. M. WARD, M. D.

Dr. King has well remarked that the properties of this plant deserve further investigation. It was a great favorite with Dr. I. G. Jones. In addition to its superior virtues as a tonic it possesses the property of an alterative, and for this object seems to answer a good purpose where any vegetable alterative is indicated.

I have used it in cutaneous affections, and in scrofula. In scrofulous ulcerations I use it internally in doses of a teaspoonful of the powdered bark in the course of the day; with a poultice of the same with elm bark, to be applied locally. The same course has cured inveterate porriginous eruptions of the scalp. I have in mind some five cases of scrofulous ulceration of glands about the neck that have been permanently cured by it alone. Whether it would be as efficient in syphilis I do not know, as my rural patrons are not thus afflicted.

Public Prizes.—The Superior School of Pharmacy in Paris has been authorized by Imperial decree to accept 500 fr. rentes, offered by M. Menier, pharmacien, for the foundation of an annual special prize for medical science. It will bear the name of the Menier Prize.

OZENA.

BY PROF. T. J. WRIGHT.

Chronic inflammation of the nose in some cases may be a mild and trifling affection, easily managed, depending on the cause and constitutional complications at the time and subsequent to the period of development. In others, it is as grave and persisting; baffling the best directed efforts to stay its onward march; implicating alike the delicate mucous membrane, periosteum, and osseous structures of the organ.

At an early period, the secretion of mucus is very much diminished in quantity, and modified in quality, depending upon the grade of the inflammatory action. Later, the attention of the patient is attracted to the seat of the local lesion by sense of uneasiness, heat, and stiffness of the parts. The membrane swells and thickens, the result of morbid actions operating in the tissue, which produces a sensation as if the nostrils were partly closed, impeding alike the escape of the natural secretion, and the ingress and egress of air in the act of respiration. In many instances these are the only inconveniences complained of or experienced, unless the posterior nares should become involved. In that event respiration becomes more and more annoying; till at last, the function of the organ is so much impeded as to give rise to frequent and forcible efforts to remove the offending cause.

As the disease advances, the secretion becomes more copious and assumes the color and consistence of opaque mucus slightly tinged with yellow, containing more or less pus intimately blended, which is attended with no uneasiness or trouble to the patient beyond the necessity of frequently blowing his nose. At times, when the pus is secreted in abundance, it is tinged with a yellow or greenish hue, characteristic of its composition; then again, the discharge may be sanious tinged with blood, emitting, in either case, an odor more or less offensive even to the patient; and in some of the graver forms the effluvium arising from the decomposing matter retained in the nostril and fauces, is truly offensive. It is this form to which the term ozena has been more particularly applied, and is one of the most obstinate, and disgusting maladies the practising physician has to encounter. In the

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severer and more intractable forms, the stench arising from the parts is so annoying and repulsive as to render the sufferer an outcast from society, as much so as if some malignant growth had sprung up to annoy and torment him.

Offensive as the effluvium is, there is reason to believe that the discharge may occur, as no doubt it does occasionally, without a solution of continuity of the mucous membrane; but, more frequently it is associated with ulceration; and sometimes, if not very frequently, with caries of the bones or even necrosis. the latter, small fragments of bone are found escaping, mingled with the pus or sanious discharge. In others, large solid masses of tough excessively offensive matter are expelled, which are so firmly adherent to the parts as to require very powerful and repeated efforts to dislodge them. These flakes are no doubt, principally, if not entirely, composed of the hardened mucus and plastic exsudation from the parts involved, and their immediate vicinity: which accounts for the streaks of blood sometimes seen ramifying through them. The sense of smell is very much impaired, the amount of impairment depending on the extent and depth of ulcerations; and in the more aggravated cases it is entirely lost.

Whatever form this may assume, it often extends over months and even years of time, pursuing a slow but onward course; at times remaining almost stationary, as if to induce the belief of a speedy cure; then again, from some general or local cause, its ravages assume a more active aspect, and for a time the discharge becomes more copious and exceedingly offensive, threatening an immediate and final disorganization of the parts; bidding defiance alike to all ordinary modes of treatment, and baffling the best skill to subdue and control it; till at last, both patient and physician manifest misgivings as to the possibility of either permanently mitigating the annoyances to which the former is subjected, or to establish a reasonable hope of a cure by a persevering course; the malady is left to drift, like a log on the water, with the current, and the patient to eke out a miserable existence.

The Cause is not unfrequently obscure. It may supervene, as no doubt it frequently does, on the acute form of inflammation of the nares. Foreign bodies lodged in the nostrils are accused of

acting as excitants to the delicate tissue in which they are imbedded, and forming nuclei around which the matters secreted find convenient resting places. In others, and by far the greater number of cases, it appears to be associated with some taint of the system, such as scrofula, which is so common and so generally disseminated through all ranks and grades of society as to render it a problem not easily solved, to decide with certainty who is not contaminated with this common scourge of our race. Glandular enlargement, and various cutaneous erruptions, especially those of a scalv character, are the accompaniments of this taint; and are almost universally associated with disorders of the digestive apparatus, which play a very important part, and tend to keep up, when once established, a chronic inflammation of the fauces and nostrils. Ozena may depend on some obstruction or impedimen to the free exit of the mucus, before the part becomes seriously implicated and prior to the period of ulceration, which may collect in such quantities as to obstruct the passages, and gradually though steadily undergo decomposition; which not only tends to establish local inflammation, but exhales a very offensive odor.

The offensiveness, however, of the discharge, or its retention, cannot be the sole cause of the morbid action; but are aided, no doubt, by the taint of the system, or some morbid constitutional tendencies, such as scrofula, scurvy, or syphilis. In not a few cases the latter plays an important part either in an open or hidden form. Indeed, providing the doctrine advanced by syphilographers be true, that scrofula is only a modified form of syphilis, the virus having passed through a number of persons, as vaccine virus is passed through to protect the system from the ravages of small pox,—no wonder that such maladies as ozena are tedious to cure in some, and in others incurable, when they depend upon a cause acting and reacting on every tissue, and in constant operation, permeating the larger as well as the most minute twigs of the vascular system.

The *Treatment* must be both constitutional and local. In some of the simpler forms of chronic inflammation of the nares, great service may be rendered by injecting into the nostrils, morning and evening, a sufficient quantity of tepid water to cleanse thoroughly the parts, and free them from the accumulations to which

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they are subject; and the injection of warm water should be followed immediately with one of a weak solution of sulphate of zinc, sulphate of copper, nitrate of silver, or perchloride of iron. The sulphate of zinc I am in the habit of using, commencing with a solution containing from two to four grains to the ounce of water, which should be increased in strength in a week or two, to ten grains or more. It is important that the syringe should be favor. ably directed and the head placed in the most convenient position for throwing the solution to the parts implicated. Cleanse the parts thoroughly by repeatedly injecting into the nostrils and fauces the tepid water prepared for the purpose. Unless this preliminary be complied with, the medicated solutions will avail but little. No doubt, in the hurry of the moment, or for want of reflection, this important requisite is but seldom complied with by very many who pay but little attention to this important branch of their profession. In some cases, the seat of the disease can be reached by a camel's hair pencil, providing the nostrils only are involved: in that event, the pencil is the most convenient instrument, and its introduction into the nostrils the most appropriate method of applying the medical agents, which will admit of a stronger solution being used; at the same time the loaded pencil can be brought in immediate contact with the diseased surface, and the unaffected parts remain undisturbed. Ointments of these and other medicinal substances, are equally useful and very conveniently applied in this way.

When the discharge is offensive, some of the deodorizing solution should be used immediately after the tepid water, and repeated morning and evening. The liquor sodw chlorinatw, one fluid ounce to ten of water, will be found strong enough at first, and should be increased to meet the indications of each case. Solutions of lime, potassa, and creasote, are frequently used also in the same way, and of corresponding strength. Should the discharge be very profuse in any case, with a tendency to bleed, no preparation will surpass in power and effect a solution of the per chloride of iron, varying in strength from three to ten parts to one hundred parts of distilled water. Solutions of iodine with iodide of potassium, are not only useful, but really valuable, and in some cases will supersede the necessity of any others.

The constitutional treatment must be varied and adapted to the peculiarities or morbid tendencies of each case. Scrofula and syphilis require their appropriate treatment. The former and even the latter will be benefitted by the syrups and decoctions, simple or compound, of stillingia and sarsaparilla, with the iodide of potassium added. Cod-liver oil, the ferruginous preparations, and the various tonic barks, with or without a few drops of nitric acid in each dose, constitute a few of the more important remedies to be used as circumstances may appear to indicate.

A warm bath once or twice a week, as an auxiliary to the local and constitutional remedies, must not be overlooked, as it constitutes a very important link in the chain.

In not a few cases all the skill of an experienced veteran of the art will be called into requisition, aided by perseverance that never falters, in conducting to a safe termination the worst forms of ozena.

BOOKS PAMPHLETS, ETC.,

BY THE EDITOR.

Among the books that have been received during the past month, none have been more welcome, or more deserving a hearty commendation, than the *Annual of Scientific Discovery* for 1860, by David A. Wells, published by Gould and Lincoln, of Boston, and sent through Geo. S. Blanchard of this city.

For ten years, Mr. Wells has recorded a synopsis of the progress of the sciences; and his Annual has become as much a necessity in the library of the Scientist, as the day-book or ledger is in the counting-room of the merchant, or the log-book to the mariner. As it costs but \$1,25, nearly every one can procure it, and those who can buy it should do so.

D. Appleton & Co., of New York, have published Florence Nightingale's *Notes on Nursing*, and as they have wisely distributed very freely to the press it must make a deep and favorable impression upon the public.

It is a wise and good book, teaching both what to do and what to avoid doing, for the sick and in the sick chamber.

It is cheap, and brief, costing but little money to purchase it

and but little time to peruse it, and is an admirable book for a present from a parent to a child or from one friend to another, and will be carefully preserved by those who have it and are called on to care for the sick. It was handed me by Rickey, Malory, & Co., of Cincinnati.

Robert Clark & Co., have given me from the publishers, Rudd & Carleton of New York, *Woman*; (*La Femme*) by J. Michelet, author of *Love*, and translated from the French by Dr. J. W. Palmer, of New York.

This work contains many things which should be made known to the people, and in regard to which they are in general quite ignorant, and will therefore command and repay perusal; but doubtless it will be but the few more intelligent and cultivated persons who will understand and appreciate the wise and noble intentions of its author. There are some ideas in it which I cannot at present endorse; but I do most heartily commend the book to the medical profession.

An Answer to Hugh Miller and Theoretic Geologists, from Rudd & Carleton of New York, is a theological controversial work, in which the writer, Thomas A. Davis, with earnestness and zeal, advocates what he supposes to be the teachings of the Scriptural or Mosaic account of creation, and "denounces in unmeasured terms" what he understands to be the attacks of Hugh Miller and the geologists upon the Bible; and Miller's "frenzied attempts to blast the truth of the Mosaic narrative of creation."

To the theologian this work is of more interest than to the physician.

Prof. James Bryan has sent his Introductory Lecture to the Winter Session of the New York Medical College, on the subject of *The Medical Profession and its Claims*. It is a well written lecture, and merits the honor of being published by the class.

An Introductory on the value of a knowledge of Botany to the practitioner, an interesting and useful Lecture, has been received from some one connected with a Medical College in the South. I intended giving it a fuller notice, but the pamphlet has been removed from the office, thus preventing me from giving the name

of the talented author, or favoring the readers of the Journal with gems extracted from its pages.

The Human Voice: Its right management in reading, speaking, debating, etc., by the Rev. W. W. Cazalet, an English work, has been republished by Fowlers and Wells, of New York. This work contains suggestions of very great value, briefly and clearly written.

The Druggist of this city which has the past year been published by C. S. Williams, has been sold to C. Augustus Smith, the well known Druggist and Pharmaceutist, who will be both publisher and Editor. It will probably more than sustain its present commanding position for science and for usefulness.

The First number of the Hygienic and Literary Magazine, published at Atlanta, Ga., has just arrived. It is interesting and useful.

Number two of the Louisville Medical Journal, a new monthly, edited by Dr. T. W. Colescott, who years ago was associated with Prof. Drake in this city, is received. It is a valuable publication.

The Chemist and Druggist, published in London, Nos. 1, 2, 3, 4 and 6, are received. It is very useful for the Trade.

Remarks upon the Medicinal Properties of the Blackberry Root.—The blackberry root has been long employed in both professional and domestic practice as a remedy principally in disorders of the bowels. Dr. Cyrus S. Sneed, of Culloden, Ga., in a short article in the Southern Medical and Surgical Journal, speaks of its remedial virtues. Dr. Sneed thinks that it is an error to suppose that its usefulness in disorders of the bowels depends principally upon the tannic acid it contains. He believes that its most powerful effects in those affections are attributable to the bitter stimulant or tonic extract, distinct from its astringency, the latter having no more effect than ordinary vegetable astringents. "In order to obtain this extract separate, the root when taken from the earth should have its bark immediately grated, and cold

water applied to it. Like a great many other vegetable astringents, in this process tannic acid is retained in the bark, whilst the bitter principle is extracted by the water. * * A small quantity of this fluid taken into the stomach, increases the appetite, and, at times, I find, produces a glow over the surface of the body, which induces me to believe that its therapeutic action is stimulant rather than tonic, as stated by most authors.

"I have found this preparation to produce some of the most extraordinary cures in chronic diarrhœa and dysentery, and even in cases where all other remedies failed, and in the shortest possible time. The remedy prepared according to the method described above has a decided advantage over the astringent preparation of the same root. The lafter should be used with the greatest caution, lest, by suddenly checking the discharge from the intestines, anasarca be produced. The remedy prepared as proposed above should be given in small doses, five or six times a day. There is hardly any danger of its producing costiveness."

ON THE TREATMENT OF HERNIA BY ELECTRICITY.

In the first of a series of articles upon applied electricity, the fruits of ten years' investigation, Dr. Clemens gives an account of his employment of it in the treatment of hernia. He commenced its use in 1850 by endeavoring to produce a diminution in the size of the hernial apertures in a case of large double inguinal hernia. One of the poles of the battery, a massive metalic knob, was introduced deep into the canal pressing a flap of skin inwards, and a moderately strong galvanic stream, increased daily, was passed along this during six minutes. At the end of a week the hernia protruded less easily, and the apertures had become When the examination was made before and after narrower. each seance a great difference was always found in the accessibility and size of the sac-an observation since repeated hundreds of times.

The application of the galvanism also has the good effect of increasing the peristaltic movements, which in becoming more energetic effect a favorite change in the position of the intestines by altering the situation of the portion which had so long remained opposite the aperture, and had consequently become relaxed. A more complete evacuation of the contents of the canal is also brought about. The impaired vitality of the intestine, of the hernial canal, and of the abdominal coverings, is always renovated through this application of electricity. When the hernia is recent no means of treatment is so certain and so exempt from all danger; and even when the hernia has long protruded, it has often been returned under the influence of the galvanic stream or the electrical flash.

Dr. Clemens has usually preferred friction electricity to galvanism, as its operation is more rapid and its effects more energetic. Among the twenty-seven patients so treated, none have complained of the least unpleasantness; but on the contrary they have found many inconveniences disappear under its influence, and especially obstinate constipation. In very sensitive persons diarrhea may follow an energetic seance. When a hernia has been recently produced, as by a fall, lifting, etc., the success of the method is often surprisingly rapid, and in marked contrast with the slow progress of treatment by trusses, etc. A double hernia thus produced was cured without any bandage in twenty seances, and has remained so now for two years—the treatment commencing a week after the accident.

Dr. Clemens states that for a large hernia, which can only be kept up imperfectly by any ordinary truss, he has contrived a galvanic truss which operates with remarkable efficacy. It is constructed of copper and zinc plates, or pieces of copper and silver money having felt or leather interposed, which is kept moistened by the saline solution necessary for the excitement of the pile. He again dwells upon the importance of exciting peristaltic action, not only in hernia, wherein it may often prevent strangulation being produced, but in various other affections due to a sluggish movement of the intestine. In numerous experiments upon animals in which powerful shocks were employed, no ill effects resulted from the increased intestinal action produced.—Charleston Medical Journal.

PATHOLOGY OF THE MOUTH.—ACUTE CATARRH OF THE MOUTH.

BY C. H. CLEAVELAND, M. D.,

The phenomena of catarrh in the mouth are plainly exemplified in the well known symptoms of what is commonly called "a cold in the head," or in influenza. Catarrh is by no means confined to any locality; it may be manifested in any portion of the mucous membrane, but is more disposed to attack such portions of the mucous tissue as are exposed to atmospheric or other injurious influences. Perhaps the lining of the respiratory organs are most liable to this form of disease; next, the lining of the alimentary canal; then, the lining of the genital organs; and lastly, that of the urinary organs.

But frequently only parts of the mucous membrane of those systems are affected with catarrh, or different parts of it are affected with the disease in different degrees of intensity. The mouth, being connected with both the respiratory and the digestive organs, is liable to become diseased in connection with catarrh of either the lungs and the stomach, and hence catarrh of the mouth is a somewhat common form of disease.

The phenomena of a catarrh, and the conditions that produce those phenomena, wherever the disease may be located, are:—

Firstly. Congestion of the vessels of the mucous membrane and the immediately subjacent structures, identical in character with the congestion that is present in phlegmonous and fibrinous exsudative inflammation but without the throbbing and pain which occurs in congestion with those exsudations. For, as the exsudation in catarrhal inflammation is mucus, and the mucus formed is thrown out of the membrane and organ affected, it cannot cause that obstruction to the flow of blood through the arteries that fibrinous exsudation does, and which is the cause of the throbbing, heat, and pain, felt in some forms of inflammation.

Secondly. The secretion of the part affected is first and briefly diminished; but quite soon it is greatly increased. In fibrinous inflammatory exsudation, as the amount of fibrine exsuded into the organ is increased the excretion of mucus is diminished.

Thirdly. Not only is there an alteration in the quantity but also quality of the fluid exsuded, and that change in quality is

quite different in different localities. In nasal catarrh, in place of the usual pituital mucus there is frequently thrown out a watery, saltish, serous fluid that excoriates the skin over which it flows, dissolving and washing away the epithelium and epidermis, and leaving the dermis exposed to the action of this fluid and to the oxygen of the atmosphere. At another time a thickened mucus will be poured out in considerable quantities, with its color altered from the pus globules and the vast number of detached epithelial scales it contains, together with shreds of detached epithelium, and occasional flakes of fibrine. In some forms of febrile gastric catarrh there is a formation of imperfect epithelial scales in very large quantities. This condition, when in the stomach, is indicated by a yellow coat upon the tongue, a bitter taste in the mouth, and an unusual adhesiveness of the coating to the tongue.

There are three prominent forms of catarrh, each perhaps shading towards, and perhaps running into the other. They are those here indicated; or the Serous, the Muco-purulent, and the Epithelial forms of the disease.

Serous catarrh is not often observed in the mouth, but at times, the amount of mucus, or muco-purulent fluid poured out into the mouth is very great. At such times the mouth appears to suffer from a derangement very similar to that of common inflammation. The tongue is white, not very heavily coated, at first moist or even wet, but toward the later stage of the disease frequently quite clean. The mucus poured into the mouth is swallowed, and is, together with the gastric mucus, often vomited in large quantities, or is passed from the bowels in thick stringy lumps. As the febrile symptoms that accompany this form of catarrh are apt to be remittant, this disease has been known as "Gastric Remittent Fever."

Epithelial catarrh of the month appears always to be connected ed with a similar catarrh of the stomach. It may be distinguished by the thick, heavy, yellow coat on the tongue, the bitter taste of the mouth, and the tenacious adhesiveness of the coating. Also by the stomach being incapable of digesting food, its being irritable, and quite apt to vomit its undigested contents. When there has been considerable retching, produced by the disease or

by a nauseating emetic, large quantities of bile will be drawn into the stomach, which may be vomited along with the ropy, tenaceous mucus, excreted by the stomach and swallowed into it from the month. If the bile is not vomited up it may pass off in considerable quantities by stool. This condition of the system has been expressed by saying the patient had a "Billious attack."

The more common cause of these forms of buccal and gastric catarrhs is,—an arrest or partial arrest of the usual excretion through the skin. The perspiration is diminished or ceases entirely, the epidermis is not as freely shed and renewed as is necessary for health, the head becomes dry, and the skin on the hands is liable to crack. We know that those who labor under an abnormal excretion from the bowels, as in chronic diarrhæa, and from profuse long-continued leucorrhæa, or from the profuse expectoration of consumption, have transparent skins and clean scalps; and we are justified in inferring that a suppression of the natural dermic secretion is often if not always the cause of buccal and gastric, as well as pulmonic and intestinal catarrh.

Fourthly. In catarrh, the nerves of the sub-mucous tissues are affected, so as to produce the prickling sensation in the nose, the the cough in pulmonary catarrh, the vomiting when the stomach is the seat of the disease, and the diarrhea when the intestines are the organs affected.

Fifthly. There is a marked periodicity observable in all forms of catarrh wherever located. The febrile and catarrhal symptoms are less in the morning and always grow worse towards evening. The disease, like the exenthemata, when uncomplicated, ends within a few days.

Treatment.—The first thing to be attended to in all forms of catarrh is to insure a free exit to the mucus from the system. From the mouth it is usually swallowed into the stomach. In the lungs if allowed to accumulate or checked in its flow by the use of opiates, the patient certainly suffers. In the stomach and bowels, the mucus provokes vomiting or diarrhea, and it is never well to arrest these entirely so long as the inordinate secretion continues. It may even be necessary to give emetics, but more particularly mild cathartics, to aid in expelling any accumulation of mucus. In epidemic catarrhs, mild warm purgatives with

sudorigentic agents, are all the medicines physicians are called upon to administer.

Even when the patient is quite debilitated, mild but efficient measures should be taken to dislodge and evacuate any considerable accumulation of mucus, and if cautiously managed, the patient will feel stronger for having been relieved of the load that was weighing him down. When the stomach is thus embarrassed, it cannot absorb food or medicine. But when it has been emptied of its thick layer of tenaceous secretions, both medicine and food can be taken with benefit.

As an emetic in this disease, the common table salt, to induce free osmosis of the watery portion of the blood into the stomach and detach the adherent mucus, will be found very beneficial. Vinegar in proper quantities is found to be an admirable solvent for the mucus, and as an astringent it checks its flow. An infusion of hydrastis Canadensis root, to be taken whenever the tongue or stomach have been cleansed so as to allow it to come directly in contact with the mucous coat, is a very superior article.

The bowels should be moved with the mildest and most gentle cathartics, mixed with a little bicarbonate of potassa, or with the chlorate of the same alkali.

In all forms of catarrh there is an unusual amount of excretion of the fluids of the body, and plenty of water in some form must be given to supply this waste. The thirst that is a usual accompaniment of catarrh is a natural instinctive one, and should be gratified.

Diet.—As there is a diminution of the digestive power as well as an increased demand for fluids, liquid foods are found to be far preferable to solid ones. Solid meats should not be given to patients suffering from catarrh, but animal food in the fluid forms mentioned while treating of Arrested Secretion, will alwaye be found beneficial. Especially should the food be suspended in considerable water in the epithelial form of the disease.

CHRONIC CATARRH OF THE MOUTH.

This form of disease especially when the mucous membrane of the fauces, throat, and stomach are involved, in addition to that of the buccal cavity, is often known as "mucus flux." Although closely allied in nature to acute catarrh, it does not appear to be the result of the acute form of the disease.

In chronic catarrh of the mouth and stomach, the tongue is smoother, glazy, and wet; with a quantity of white epithelium spread over the tongue and the lining of the cheeks. Although this coating of epithelium is never very thick it is sometimes remarkably white.

Chronic catarrh does not, like the acute disease, tend to a speedy termination; but in spite of treatment, it at times will progress from bad to worse; or if apparently improving for a time, will grow worse again, and perhaps linger for years a constant torment to the sufferer.

Not only is the mucus increased in quantity in chronic catarrh, but as shown when speaking of the acute disease, it is also changed in quantity, becoming tough and more than naturally adherent to the parts to which it is attached. It hence acts as a foreign substance, enveloping the food, impeding the flow of saliva and the gastric juice, and covers over the lymphatics and veins as well as the mucous membrane and thus hinders the absorption of food and drinks. As the food is not properly acted upon by the saliva and gastric juice, and is not readily absorbed, it undergoes fermentation and putrefaction in the stomach, and thus generates morbid acids and morbid gases, and causing uneasiness, distress, and not unfrequently severe pain in the stomach and bowels.

As the excessive vitiated mucus, and undigested, fermenting, putrifying food descends into the intestines, it causes constipation, griping, cholic, and is finally evacuated in hard lumps covered with slime.

Mucus as has been shown, and especially the secretion of the mouth, is alkaline; and as it passes into the stomach in large quantities it neutralizes the acid natural in the gastric juice and renders that fluid incapable of digesting solid animal food. It also, by preventing the food from being digested in, and absorbed from, the stomach, favors the formation of the acids of fermentation in the bowels.

As the stomach contains more mucus than usual and hence its contents are rendered alkaline, the alkalinity of the blood may be no greater, and perhaps be even less than that of the contents of the stomach, and thus the osmotic circulation may be outward into the stomach instead of into the system, and in this way cartarrh of the mouth and stomach may cause a serous diarrheea.

When there is an arrest of the secretion of gastric juice, as here indicated, and albumenoid food is eaten, the albumen is not digested, and passing into the intestines, sulphureted hydrogen gas is formed giving the very offensive odor to the gaseous eructations and the gas passed out of the bowels; and also, if it is absorbed into the system, poisoning the fluids, depressing the vital energies, and finally escaping through the lungs and skin and rendering the breath and cutaneous exhalations quite offensive.

Starchy and saccharine foods can be digested in small quantities: but if taken in larger amounts than can be digested, and especially if mixed with animal food, the mass quickly undergoes decomposition and causes distress in the various ways here described. Or it may quite soon be vomited from the stomach along with the mucus.

If much mucus is vomited from the stomach after a meal, it is always alkaline; but if the food has lain in that viscus long enough to become fermented, the liquid will be quite acid, causing acid eructations, so acid as to set the teeth on edge and fill the room with a powerful penetrating odor of acetic acid. At times there will be observed lumps of alkaline mucus floating in the acid fluid vomited up.

The *Treatment* already detailed as applicable to acute catarrh of the mouth, will be found useful in the chronic form of the disease. Chlorate of potassa, hydrastis Canadensis, asarrum, and other medicines found to be useful in inflammation of the mucous membrane, may be applied in the form of gargles and lotions. Sometimes the vapors of medicine seem to be more efficacious than the infusions or solutions.

The peculiar derangements pointed out as the results of the disease, will each demand its own peculiar treatment, which may be adopted in conjunction with that directed to the original malady.

PLEURO-PNEUMONIA IN CATTLE.

Accounts have been received of a very fatal epidemic prevailing among the cattle in central Europe. Immense numbers—amounting to millions—of cattle, have been lost by this disease in Europe. The governments of France and Holland have offered large rewards for a remedy, but none has yet been discovered. Inoculation has been found a preventive, and in localities where sixty per cent. of the cattle used to die of this disease, only one per cent. die since vaccination has been tried. The process is described as follows:—

"This inoculation is done near the end of the tail. The hair is clipped off, the skin cleaned, and two incisions made with a lancet, into which the virus is introduced. The virus must be obtained from the lungs of a cow suffering with the disease, and killed for the purpose, and not from an animal that has died in the natural way from the effects of the disease. The manner of obtaining it is to cut off a portion of the lung between the healthy and the infected parts—the part marbled like water and blood is wrung out into a vessel and allowed to stand one day, when the bloody part will sink to the bottom, and a lemon colored liquid will remain upon the surface."

Last summer, an animal was brought from Holland to Belmont, Massachusetts, to the farm of a Mr. Cheney; and in that town the disease has destroyed a large number of cattle. A calf was sold in Belmont and removed to Brookfield, where he had the disease, which was conveyed to other cattle, until already, nearly or quite fifty have died of the malady.

The only outward symptoms of the disease is a persistent cough. Post-mortem examinations have revealed a disorganized putrid condition of the lungs. It appears to be infectious, but not contagious.

MARRIED.

On the 15th ult., at the house of the bride's mother, by the Rev. D. Hartman, Da. A. C. Heffelck of Wellsville, Pa., to Miss A. Norrie Hayward, daughter of the late Dr. Hayward, of Rossville, Pa.

On the 8th of March, by the Rev. G. W. Warner, Dr. J. H. BAXTER, of Woodford, Ky., to Miss Isabella Welshares, of Springton, Hendricks Co., Indiana.

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TYPHUS FEVER.

BY THE EDITOR.

The name Typhus has been given to this form of fever because stupor has been supposed to be a common, and its most characteristic symptoms.

As has been stated when considering the classification of fevers, this disease *originates* from the blood being poisoned by the absorption of human exhalations from too many persons being congregated in unventillated or imperfectly ventillated spaces.

Dr. Watson thinks that this contaminating effluvium enters the blood chiefly by being inhaled into the lungs by breathing.

As the disease originates, apparently, from the reabsorption of the exhalations from well persons greatly crowded for want of space, and where those exhalations cannot become diffused and dissipated in the air for want of proper ventillation, it has received various names at different times, indicative of the locality where it first appeared. Hence Hospital fever, Camp fever, Jail fever, and Ship fever, are terms by which it is familiarly known in many regions.

But wherever it has originated it has proved eminently infectious; and hence, spreading as an epidemic it is often met with in its purity, or more frequently, modified and complicated, far from the point of its origin.

As there has been no small amount of confusion in the use of terms applied to the different varieties of continued fevers, and as even the erudite and accurate Dr. Watson, has not until recently become fully cognizant of the distinction between Typhus and the so-called Typhoid, or Enteric fever, it may be proper to indicate the differences that point to those two forms of continued

fevers as distinctly different diseases, with some degree of care and minuteness.

When these diseases are observed at the place of their origin, no one has failed to discover the distinctive characteristics of these two forms of fever; but when they have spread abroad, been modified by the addition of diverse and complicating causes of disease, and particularly when modified by medical and hygienic treatment, the distinctive characteristics become somewhat less clear, and they are not always readily recognized.

The commencement of Typhus fever is not always uniform. It may be that the patient has been ailing for several days, not feeling well and yet not ill enough to give up his usual avocations. His face wears an abstracted, languid look, which leads others to observe that the patient looks ill before he has made any complaint. He becomes feeble and easily fatigued. During these days he very rarely has a diarrhea, which is a very common premonitory symptom of the fever sometimes called Typhoid. The bowels are not irritated or loose as a general thing, but are often confined, and almost always quite sluggish. The patient becomes listless, unwilling to exert either mind or body. His senses loose their activity and delicacy; he has uneasy feelings and wandering pains in various parts of the body; he may be giddy, or even drowsy in the day, but does not sleep well at night; and his entire energies of body and mind are depressed.

This condition of the system appears to be produced by the peculiar poison of the disease as it floats in the blood making itself felt by the nerves even before it has caused those peculiar changes in the blood corpuscles which are necessary to cause fever, for *febrile* symptoms have not yet been manifested.

Sometimes all these premonitory symptoms will be wanting, and the disease will be ushered in at once without any such warning.

The outset of the disease, whether preceded by premonitory symptoms or not, is usually a fit of *shivering*, without chills, but with very severe headache, the pain being across the forehead. The pain is never at the back of the head and seldom at the temples. At times, although rarely, there will be a sense of heaviness or weight in the head, with vertigo, in place of the usual

severe pain. When there are no series of premonitory symptoms, but the disease is suddenly manifested, there will also be indications that the nerves, as well as the blood, are affected. The functions of motion, of sensation, and of thought, are changed from their condition in health; with great unwillingness, or con inability for their active exercise. The countenance has a dull, heavy, absent, and puzzled look, much like that of a person intoxicated. The muscles loose their power, and in a few hours, or a day or two at farthest, the patient is confined to the bed. These symptoms, in part at least, are produced by the impression made by the typhus poison upon the nerves.

The peculiar febrile symptoms of typhus during the first week of confinement to bed, are:—an increase of temperature of the skin, thirst, headache, throbbing at the temples, usually an increased frequency of the beats of the pulse, ranging from 100 beats in a minute with male adults to 120 in females. When the pulsations are much more rapid than here indicated, such patients usually die. If it is unsteady and variable it indicates a bad state of the system, and a probable fatal termination of the disease. In Typhoid or Enteric fever, the pulse is usually very variable, changing in a single day as many as thirty or even forty beats in the minute, without any appreciable cause; but in typhus, as has been said, it gradually rises to 100 or 120 in a minute, remains very uniform for some time, and then gradually diminishes in frequency. The pulse in typhus is usually soft, weak, perhaps quite weak, but during the first week is often hard.

During the first week, the skin is generally hot, dry, and pungent. In Enteric fever it often becomes soft and even moist at certain periods of the day. The skin feels hotter than it really is; the thirst at this period is quite troublesome; the tongue is usually dry, perhaps clean and smoothe; but usually during the first week it is furred, with the tip and edges bare and red. The fur that at first was white becomes brown in the middle of the tongue, and then black and dry. The abdomen may become slightly tender during the first week, but usually it remains unaffected.

During the first week of the disease, the respiration is slightly quickened, the features expressive of apathy or indifference, the brain dall, but the patient responds when spoken to with a brisk

sharp tone of voice, and his answers are usually rational until the latter part of the week, when delirium is often manifested. The patient lies quietly on his back, nearly motionless. He sleeps but little, but lies with his eyes open; and yet appears to be insensible to what transpires around him. This peculiar condition of coma vigil, is never present in Enteric tever. Even during this first week, the coma may be so profound that the patient passes his stools unconsciously in bed. The urine is scanty, high colored, and with a strong unpleasant smell. Perhaps toward the latter part of the week the eruption peculiar to typhus may appear, but usually it is deferred until later. Except when very malignant, death does not take place during this period of the disease.

During the second week in Typhus, the pulse becomes more frequent, weaker, and softer; the tongue gets dry and brown, with an accumulation of sordes about the tongue, and teeth, and lips; delirium becomes quite manifest, and often constant, while the headache passes away; the patient grows weaker, and slips down towards the foot of the bed; the voice becomes feeble; the swallowing difficult from weakness, or from the listlessness or indifference of the patient. The patient lies with his mouth open, which becomes dry; convulsions of the muscles, technically called subsultus tendinum are common; the tongue and hands are tremulous; the delirium becomes constant and peculiar; and the Typhus eruption becomes distinct.

The eruption in typhus is by no means confined to the abdomen, but extends over the whole surface, giving the patient an appearance somewhat resembling measles. Dr. Jenner calls the eruption the mulberry rask. It commences from the fifth to the eighth or tenth day of the disease; and like other eruptions, changes in appearance as the disease continues. It never presents papillæ or pustules, but consists of small, irregular, slightly elevated, dusky pinkish spots without distinct margins, often two or more patches of eruption coalesce, and sometimes the entire surface appears to be covered with them. The color disappears on pressure with the finger. This eruption usually gradually fades away leaving the skin dusky and mottled. In some instances the centre of the spots become purple, while the circumference

fades away and true petechiæ follow. These petechial spots are more frequently observed on the back, at the bend of the elbow, and in the groin; and are the results of the rupture of a minute blood-vessel and the extravasation of blood into the rete mucosum.

For three days from the first appearance of the eruption, in typhus fever, new eruptions appear; but after the third day, no new spots present themselves; and although they change color and fade, the spots do not disappear—except the spots on the back of the hands,—until the whole rash vanishes. The spots on the back of the hands usually disappear within twenty-four or thirty hours after their eruption. The eruption peculiar to Enteric fever, sometimes called *Typhoid* fever, and not unfrequently confounded with typhus, will be described when treating of that form of fever.

The delirium of typhus is peculiar to the disease. At first the mind wanders only in the night time, and then on awakening from a disturbed sleep. Rarely, the patient may be excited, earnest, determined to leave the bed, and impatient of control. Usually, the delirium is of a mild, rambling, tranquil kind, like a person talking in a dream. Frequently the patient will address himself as though the person talking was another one and addressing the sick one. Quite often, and for days, the patient will speak of himself as of a third person; or even carry on a continued dialogue, as of two distinct persons.

From this state the patient can be roused for a little time by addressing him in an earnest sharp tone of voice, but he soon relapses into his former condition, which appears to be one of deficiency as well as of perverted sensation. The patient is deaf, his sight obscure, his senses of touch, of taste, and smell are impaired. But sometimes, if the brain becomes inflamed, all the senses may become morbidly acute, which condition indicates an alarming state of the disease. The dulness of the senses leads the patient to take but little interest in anything. He does not ask for drinks although his mouth is parched; flies pass over his face or congregate about his nostrik and eyes, unperceived; his hips and sacrum may have bad bed sores without any complaint; the urine dribbles away, and the fæces pass without rousing his consciousness, or the urine may be retained; and in reply to in-

quiries in regard to his condition, the patient mumbles that he is quite well.

Sudaminæ are observed in this disease, particularly in old persons, but as these little vessicles are often observed in other forms of disease and are connected with the patient's condition rather than with the variety of fever he is laboring under, these require no special mention here. These eruptions have been so common in some epidemics of typhus fever as to have given a name and character to those epidemics.

It is during the second week of the disease that the fatal termination of typhus fever usually occurs. As the fatal termination approaches, putrid symptoms present themselves. The exhalations from the body are peculiar and very offensive. The tongue becomes dry, black, fissured, and frequently bleeds. The patient often is unable to protrude it even when made to comprehend the request to do so. The teeth and lips are loaded with sordes; the flesh under the bed-sores sloughs; and in extreme cases the extremities mortify, even the legs have rotted off.

If a typhus patient lives through the second week of the fever the chance for a final recovery improves, unless there has been some other disease that the fever has aggravated or that has sprung into existence during the sickness.

The more grave symptoms gradually begin to abate. The mind of the patient seems to return; the stupor passes away,—and he pays increased attention to what transpires around him; the temperature and general feeling of the skin becomes more natural; the tongue becomes moist, and clean on the edges, while the sordes cease to accumulate; the rapidity of the pulse lessens; the evacuation from the bowels are more normal in appearance, and are no longer passed involuntarily; and the urine increases in quantity and improves in appearance. It is now that the remarkable emaciation of the patient becomes manifest, perhaps in part because the face resumes its intelligent appearance and is so wonderfully changed.

Frequently, the improvement is so very gradual at first as hardly to awaken hope: but it is sometimes connected with a remarkably profuse perspiration.

The *Treatment* of typhus fever would not be so difficult to decide upon but that it is very seldom indeed that it is met with uncomplicated with other forms of fever or other maladies, and that each shade modification, caused either by the peculiarity of the organism or by the modifying influences of those harmful agencies, demands a corresponding modification of the course of treatment pursued. But there are certain indications to fulfill in all or nearly all cases, and certain modes by which those indications can best be fulfilled.

Typhus fever, if the disease does not destroy some organ, even in very severe cases, has a tendency to finally terminate in recovery. Even where decomposition and putridity are strongly manifested, if the organism is not injured by improper diet or improper medication, the fluids and even the solids may be greatly changed by the disease and a large portion of the tissues may be converted into gases, and the patient become excessively emaciated, and yet recovery may follow.

Without doubt the disease is caused by a poison within the blood, the same as intoxication or stupor may be caused by alcohol or opium within the blood: and, although it has the power of multiplying and reproducing itself out of the materials of the solids and fluids of the body, which alcohol and opium have not; yet at last the poison, usually in the gaseous form, passes away, as alcohol does, leaving the patient to rally and the system to repair the ravages produced by the fever.

If possible, secure for the patient an apartment which can be constantly well ventillated and change the atmosphere in it very many times a day. Let there be no curtains to the bed, nor anything to prevent the free escape of all the emanations from the body. Use chloride of lime, chloride of zinc, chlorinated soda, or sulphate of iron, in solution, or some other disinfectant, constantly; so as to decompose and destroy all noxious gases.

Give a mild and gentle emetic at once, of ipecacuanha, or other nauseant, to act both as a sedative to the organs of circulation and to cleanse the stomach of vitiated secretions and any remains of undigested food. Sponge the surface with cold or tepid water, but not after the disease has continued for several days, unless it can be done without frightning or exciting the patient.

Give the patient one gentle but efficient purgative, to cleanse out the intestines, as the emetic has cleansed out the stomach. Afterwards get a daily evacuation from the bowels by the mildest means possible. Injections, if not opposed, are prefferable to laxative medicines.

Have the hair cut off, and apply cloths dipped in cool water to the scalp, and repeat as often as they get warm or dry. If the head becomes cold, the lotions may be discontinued until the heat returns.

As soon as there is any considerable depression of the vital forces, with loss of muscular strength, confusion of countenance, duskiness of complexion, a mottled appearance of the skin, dark brown tongue, and feeble pulse, good strong beef tea in moderately large quantities, with bicarbonate of ammonia, Hoffmann's anodyne,—or better, pure wine, must be given quite frequently;—every two hours, every hour, or even every half hour in the more urgent cases. Nothing, absolutely nothing, that tends to depress the vitality of the patient, can ever be allowable when typhus fever has once fairly set in.

If there is much restlessness and active delirium, a tolerably full dose of morphia, perhaps the valerianate of morphia is the prefferable salt, one-fourth or one-third of a grain for an adult, should be given at night to insure a quiet night's rest. But the continuous use of opiates does harm. When the delirium tends to pass into coma, small doses of ipecacuanha are far prefferable to opium.

If the breathing is considerably affected there needs to be no very material change in the treatment, except that more stimulants and particularly ammonia, may be needed, and the chest wrapped up with cloths wrung out of hot water.

A properly ventillated room, an emetic, a mild cathartic, cold to the shaven crown, mild aperients, or if need be, gentle astringents to keep the bowels right, a little morphia, plenty of beeftea, broths, wine, or even brandy, with carbonate of ammonia, will usually suffice to keep the patient alive until the materies morbi have become exhaled from the system, and the patient has only to recover from the effects of the disease.

The great secret of the successful treatment of typhus fever, is,

to place the patient in the most favorable circumstances possible for the speedy elemination of the morbid poison—entire quietude and freedom from the annoyance of visits; continuous, careful, and perpetual watchfulness on the part of the nurse, who must not leave the patient alone even for a moment; and the use of such remedial measures from hour to hour, as the varying changes of the condition of the patient may require.

The condition of the bladder and the kidneys demand constant attention. The physician must examine into this matter day by day for himself, by passing the hand over the region of the bladder at each visit. The great liability to bed sores in this disease should be remembered and guarded against, or remedied if they have already occurred.

During convalescence no solid food should be allowed until the tongue has become clean and moist, the pulse soft and natural, and all febrile excitement has disappeared. Neither should the patient be allowed to quit his bed, nor even to set up much in it; for in a large proportion of the cases that terminate fatally, the patient has recovered from the fever, but succumbs to some error that has either caused a fatal syncope, or produced a relapse from which he does not recover.

From the first, during the continuance of the fever, and the convalescence, there must be a constant endeavor to uphold the vital forces of the patient by animal food in the fluid form, as broths, beef tea soups, to which carbonaceous or amylaceous substances may be gradually added; and wine, beer, ale, or brandy.

During convalescence, tonics, aromatics, and iron may be needed; and if the patient resides in a miasmatic region quinia may be demanded from the invasion of the disease and during the entire period of convalescence. One of the most agreeable forms of administering quinia is the simple solution with sulphuric acid, as follows:—

R Quinis Sulph. 3 j. Acid Sulph. dil. 13j. Aquæ pura, f3iv.

Dose one teaspoonful three times a day.

Where iron in combination with quinia is needed, a powder composed as follows:—

R Quinise sulph. 3j.
Ferri ferrocyanuretum, grs xx. M.

M.

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Divide into twenty powders, and give one three times a day will be found serviceable. Muriated tincture of iron in five drop doses repeated three or four times a day is also quite beneficial in some cases. So also is the aromatic sulphuric acid. Under the name of *Elixir vitriol*, this has sustained a lasting reputation.

RABIES.

BY C. H. CLEAVELAND, M. D.

From the earliest historical records of medicine until the present time, rabies has attracted the attention of both the people and physicians. But, with symptoms more marked and characteristic than those of most diseases, and with peculiarities and a fatality that has rendered it always a disease commanding special attention, even until the present day the people seem but little acquainted with it, and many in the profession are nearly as ignorant as the people.

Hydrophobia, and Rabies canina, have been supposed to be terms expressive of the peculiar and most marked symptom and the origin of his disease; and yet in some regards they are both erronious. Rabies exists without any dread of water, and has its origin from the bite of other animals beside those of the dog tribe. Still, a dread of water is common, and a bite of a rabid animal the usual cause of the disease. A warm climate, or a warm season, contrary to the popular notion, is not necessary for its development or propagation.

Wolves become mad from hunger and thirst in the coldest winter, when food becomes scarce and the springs and streams are frozen over. Several observers have come to the conclusion that the extremes of heat and cold are alike liable to produce the disease; and yet others have concluded that there have been fewer cases of rabies in January and August than in any other months in the year; and that more wolves go mad in March and April, and the greater number of dogs in May and September.

The disease has prevailed to a far greater extent in the northern and northern temperate regions than in tropical ones. In Europe and the northern part of America, it has appeared frequently as

an epidemic, but no clear and full accounts of it in an epidemic form at or near the equator have been recorded. In Prussia, between the years 1809 and 1820, there were 1658 deaths from rabies. In Marienwerder there were 228 of these deaths, and in Bromberg 162. Those provinces where the most cases occurred are contiguous to the forests of Ardennes, of Russia, and of Poland, in all of which wolves abound.

In England, the winter of 1779-80, was emphatically a hard, cold winter, and this disease was very frequent and very fatal then,—more so than for a long time before. It also was very common and very fatal in Maryland that winter. The winter before it caused great alarm in the north of Wales. During the fall, winter, and spring of 1791-2, it was very prevalent at St. Edmundsburg where seven dog3, one cow, and two human beings died of the disease. In the United States and the Canadas, the disease has always manifested itself more frequently in the cold than in the warm months.

Baron Larrey confirms the former statement of Volney, that the disease has never been known in Egypt, although there are a superabundance of miserable curs infesting the cities. Dr. Barrow says it is extremely rare at the Cape of Good Hope and in Caffraria. Dr. Mosely said it is unknown in the Island of Antigua; and Dr. Hamilton said there had not a single case occurred in Jamaica for a period of fifty years. In India, where dogs have always been quite numerous, the disease has been very rare until recently.

In Cute, however, with a hot climate, whose inhabitants are professional dog-fanciers, breeding many choice varieties for exportation, and hence dogs are very numerous and well fed, and dog-fights are common,—rabies has prevailed to a remarkable extent. In India, also, the disease has recently appeared and spread rapidly.

In 1783 it was quite general in the West Indies, and Dr. Moseley said that dogs were seized with it that had not had commution with others. But Dr. Hamilton said the disease was communicated to those on the Islands by dogs from the United States.

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Historical records of the disease fully establishes the fact that rabies in animals and in man is not peculiarly a disease of the warm season of the year, but has prevailed more frequently and with greater severity in cold climates and during the winter.

Putrid meat cannot cause rabies among wolves of the northern forests in winter, as the extreme cold precludes the possibility of putridity even if there was meat for them to feed on. In Constantinople and other eastern cities, where dogs abound and are the only scavingers and cat freely of putrid meat, and in Egypt where they followed the army of Buonaparte and fed upon putrid carcasses of animals,—as well as in Caffraria where the dogs live entirely on flesh, which is nearly always putrid, rabies does not follow as the result of this diet. It very seldom is to be met with there.

During the war of Independence, and particularly at its conclusion, all the horses and other animals that died in Philadelphia were carried to the commons surrounding the city to putrify and be eaten by dogs, and yet rabies was more rare during the prevalence of that custom than after it was abolished.

Neither extreme heat nor extreme cold prevents the domestic dog from getting plenty of water to allay its thirst; and even where wolves have been supposed to have become rabid from thirst, there has been proof adduced to substantiate the supposition. In Aleppo, and other parts of Africa where many dogs die for the want of food and water, this disease never occurs. Neither does it upon the parched pampas of South America.

As most cases of rabies have been traced directly to the bite of an animal as its cause, and as most if not quite all other supposed origines of the disease have been proved to be untenable, it is quite proper to say that rabies has its origin from the bite of an animal.

Dogs are by no means the only animals whose bites have produced rabies, and hence the suffix canine is not exactly proper.

Nearly all the animals that are carnivorous, ferocious, and irascible, when rendered very angry, appear to be capable of originating rabies; and when an animal has the disease, such animal is capable of causing the disease in others.

Morgagni relates a case of rabies following the bite of a cat that was not diseased, but was made very angry. Dr. C. Dulx,

as quoted by Dr. White, stated that in several instances in Batava, rabies followed the bite of enraged animals; and that he knew of a case following the bite of an enraged cat. Dr. Lipscomb, said that whatever is capable of exciting the anger or agitation of dogs seems likely to produce this disease. Dr. Neuman had a patient who died of rabies following the bite of a dog who did not either before or afterwards give any indications of the disease. A similar case is mentioned in the French Dictionary of Medical Science.

On the hypothesis that the bite of an animal, intensely angry, and more especially such animals as when angry have a large increase of frothy saliva in the mouth,—may originate rabies, which can be propagated from an animal laboring under the malady to another animal or man by inoculation in the same manner that syphilis can be propagated, we can readily account for the disease being so much more prevalent in some countries than in others.

The dog is more prone to anger than any other domestic animal; and those varieties which are common in the north of Europe and the north of America, and trained to guard the property of their owners,—than the varieties found in warmer regions, and many of which have no masters.

Wolves, as found in Europe and America, are gregarious animals, and not unfrequently do they get angry and fight over their prey and their food; and then their bite may be followed by rabies which by being propagated to others will thus cause an epidemic.

Most writers concur in the opinion that dogs and other animals already rabid, never *fght*, however much they may bite such other animals as they meet; but numerous instances are on record of persons who have been bitten by dogs who were fighting, and the persons had rabies while the dog never had the disease before or after the bite.

Dogs frequently fight and do not cause rabies:—so also do rabid animals bite many others to whom the disease is not imparted; and the uncertainty of the bite of a rabid animal being followed by the disease has been the foundation on which most of the reputed specifies for this disease has rested.

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Symptoms of Rabies in Animals.—It is always desirable to determine with certainty if an animal and especially a valuable dog, suspected to have rabies, has really become rabid; not only to determine in regard to the diseased animal itself, but also in regard to persons who may have been bitten by the suspected animal.

As there are several varieties of this disease, it is difficult if not impossible to determine the first symptom that appears. Usually, however, several days previous to the active manifestation of the disorder, a change in the habits of the dog can be observed. He is heavy, dull, languid, and appears indifferent to the calls or caresses of his master, and to his food and drink. He is unsociable, solitary, does not bark but makes a moaning noise; is peevish and easily offended. His ears and head hang down, and he walks as if dull or drowsy; and still he attends to and obeys his master. But he shows an unusual disposition to quarrel with other dogs.

After a few days he pants and breathes heavy and thick; lets his tongue hang out of his mouth, which he keeps constantly open. He walks slowly as if half asleep, and starts, and perhaps runs, but not far. He soon pays no attention to his master, and will bite if he has an opportunity. His eyes are dull, dispirited, full of tears, and red; his voice is hollow and hoarse; his tongue of a lead color. He wanders without any apparent design, and snaps at or bites such animals as he meets, but pays little or no attention to anything around him. If confined, at this stage of the disease the dog bites and gnaws everything near him, even his own feet; his mouth appears filled with frothy saliva. If roused or approached, he appears momentarily furious, but soon relapses into inattention. He soon grows faint and weak, frequently falls down, increases in frenzy, rises, and snaps at everything, and in from ten to thirty hours, dies.

During the whole course of the disease a dog can easily swallow both solids and fluids. He usually appears to have no aversion to water, and certainly never attempts to avoid it. Dogs do not have always hydrophobia, even when dying of rabies.

An early antipathy to other dogs, but especially to cats, is very marked. Dr. Mease thinks that the most certain sign that a dog

is rabid, is, that all other dogs avail him. This remark, however, does not appear to have been made by any other observer.

The duration of the active stage of the disease varies from three to seven days. Most dogs die on the fourth or fifth day.

Rabies in the human family seems always to have been caused by the bite of an animal laboring under the disease, or laboring under a state of intense anger and excitement. After the bite has been received and the hurt healed up, the disease may remain undeveloped, days, weeks, months, and perhaps even years. Dr. Hamilton fixes the tenth day after the bite as the earliest period at which the disease has appeared, and nineteen months the latest. Perhaps from one to two months is the more usual period of latency. But well authenticated cases are on record where several years elapsed after the bite before the appearance of rabies.

When the part bitten has been protected by clothing, the clothing seems to have protected the person from the introduction of the virus, and very rarely indeed have such bites, even from animals intensely rabid, caused the disease in the person bitten.

Symptoms in Man.—After the bite, the wound usually heals readily; but sometimes it appears to resist in spite of treatment, causing an open ulcer that discharges a liquid matter for some time. After the wound has healed, and at the approach of the attack the cicatrix becomes hard, elevated, swollen, and has at first a prickling or itching sensation; and pain like that of chronic rheumatism extends to the neighboring parts, and particularly toward the throat. Sometimes the cicatrix becomes surrounded with livid or red streaks, and appears to be inflamed, but has no other peculiarity.

Pain, dull and heavy, may seize the head, neck, breast, etc.; and of a flying, convulsive kind, may be felt in the neck, and joints. In the later stages, the pain is greatest around the heart. Soon after the invasion of the disease, a dull teeling of lassitude, with pain in the head and vertigo, is manifest, followed by depression, melancholy, muttering, drowsiness, disturbed mind, irritability, disturbed slumbers, convulsive agitation, perhaps deafness, sorrowful countenance, watery-eyes, pale and pinched face, perspiration upon the forehead, unusual discharge of saliva,—but with dryness of the fauces, foul tongue, and fætid breath. There may

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be from the first, a struggling for breath, nausea, and billious vomiting, with deep oppression at the pit of the stomach. The precordial oppression accompanies the disease throughout all its stages.

Later, more fever is developed, the sense of horror is increased, sleep is lost, delirium is more constant, with an aversion to polished surfaces, to light, and lastly perhaps to fluids. A breath of air, or even a slight sound offends, the gullet becomes constricted, a difficulty is experienced in swallowing, but liquids and water can yet be swallowed with some difficulty. Afterwards the difficulty of swallowing increases, especially with fluids, while solids are swallowed but with some distress. At a later period it may be the patient cannot swallow solids even.

In this stage the patient moans bitterly, he sinks into despondency, his thirst becomes intense, his eyes become bright and furious, his tongue projects from his mouth, from which foam may drip, his strength fails, and the patient dies in spasms.

Many reports of cases where the disease has been most carefully watched seem to establish the fact, that there is a dread not of water, but rather a dread of swallowing, although the spasm of the glottis in swallowing appeared often greater when fluids were attempted to be swallowed, than with solids. The dread of swallowing fluids is very much more marked in some cases than in others. Nearly all patients who have been questioned while in their lucid intervals, have distinctly said that they had no specific dread of water, or of fluids even, but of the pain produced by the attempt at swallowing.

Sometimes the peculiar spasmodic difficulty of swallowing fluids comes on early in the disease and suddenly, without any premonitory indications. Sometimes the disease commences as an ordinary sore-throat, but with the soreness daily increasing, and quite soon with convulsions in the fauces. In the entire course of the disease there is extreme sensibility and irritability of the nervous system. But the symptoms are very varied in different cases.

Post-Mortem examinations have thrown but little light on the the nature of this disease; and have give no indications of value in regard to its treatment.

Treatment.—Preventive.—When a person has just been bitten by a rabid animal or one suspected of rabies, the wound should be thoroughly laid open, and cups or suction applied to promote a free discharge of blood. Then the wound should be carefully washed with chlorine water, dilute aqua ammonia, or a solution of potassa of sufficient strength to cause some smarting; and afterwards with arnica water, or tincture of arnica diluted with water. If the bite is on an extremity or limb, the limb should be bound with a broad flat ligature between the wound and the body, to cut off the lymphatic and superficial venous circulation. and thus hinder the absorption of the virus into the system. As the virus appears to remain latent at the seat of the wound for a considerable period of time this ligation may not do good, but it cannot do harm. Internally the patient should take plenty of the infusion or tincture of scutellaria lateriflora for weeks and perhaps months; also of bromine or chlorine in some convenient form.

Many and diverse remedies have been supposed to be sovereign specifics in preventing this disease, and as but a very small proportion of those bitten have the disease, without treatment, anything in which the people repose confidence will acquire the reputation of curing all who escape its attack. Bathing in the sea. and drinking sea-water, has been very popular with people who dwell far inland. The famous Tonquin Medicine, or Sir George Cobb's powder, composed of musk and cinnabar, at one time was considered infallible. The Pulvis antilyssus, composed of ashcolored liverwort and black pepper; the Ormskirk Medicine, consisting of chalk, Armenian bole, alum, elecampane, and the oil of aniseed; the Anagallis arvensis, or red chick weed of Germany and England, and also of Pennsylvania and Canada: Webb's Medicine, prepared according to a recipe given by a lady to his grandmother one hundred and fifty years before, consisting of the leaves of tree-box, rue, and sage-prepared according to rule; the snake-stone, or mad-dog stone of all countries; the metallic tractors of Doctor Perkins; Crous's Remedy which he sold to the State of New York, for \$100,000, consisting of the jaw-bone of a dog, the false tongue of a newly foaled colt, and verdigris, taken from the coppers of George I., or II., to be followed by a

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dose consisting of 180 grains of verdigris and half an ounce or 240 grains of calomel "to be taken at one dose," to be followed in three hours with "four grains of pure opium, or 120 drops of liquid laudanum;" have each had their day, and have been pronounced never failing and certain specifics by men in and out of the profession.

Scutellaria lateriflora, or scull-cap has also, under the care of a Mr. Lewis who lived in West-Charter county, Penn., been highly lauded. Mr. Brown, Dr. Vandiver, and others placed the most implicit confidence in it, and as it has proved useful in other diseases when the blood was undergoing a change and the nerves were in an excited condition, it certainly is more worthy a trial than many drugs which have been and are being used.

After the wound of a bite has healed, and has remained free from any disease for a time, but becomes swollen, hard, tender, with pains shooting in various directions; the cicatrix and adjoining tissues should be removed by excision, and the wound treated as one from a recent bite. The virus appears to be infused into the contexture of the solid tissues where it may remain latent for a longer or shorter period of time; and if the parts near the wound are removed before the general system is contaminated with the virus, the patient will probably escape the disease. But it may be well also to resort to the other treatment recommended to be pursued after a recent bite.

When rabies has actually presented itself, no course of treatment that has been pursued has secured the confidence of the profession. Every case has been treated as an experiment. The most diverse methods of treatment and most diverse remedies have been said to have effected cures, and yet each method and medicine has so uniformly failed of preventing a fatal termination of the malady as to have shaken the confidence of those who have tried them. Prophylactic treatment has and may, in many instances, prevent the recurrence of rabies, but no one can say with certainty that any remedy has cured it when once fairly it has set in. Many cases are on record where the patient recovered, but whatever treatment has been adopted, the disease has usually terminated fatally.

Everything which appears rational, and which promises either

temporary relief, or a final cure, should by no means be neglected. Each individual case will present conditions demanding peculiar treatment; and yet every case of rabies, with its symptoms and treatment, should be carefully recorded, as it may add something to the stock of human knowledge and aid us in mitigating human suffering, and perhaps lessen the almost uniform fatality of this disease.

Can a person laboring under rabies communicate the disease to another? The almost universal fear and dread on the part of both patient and attendant that the disease will become thus communicated, would indicate that such were of common occurrence. Yet, as I can find no case of the kind on record, and as such an accident could not fail of being recorded if one occurred, I unhesitatingly come to the conclusion, that the disease cannot be propagated from man to man, and the fear, however natural, is unfounded.

COFFEE IN THE BRONCHIA.—OPERATION.

BY FRANCIS BARKER, M. D.

I was called on the 10th of November 1859, to visit a son of Mrs. H——, aged nearly four years. He had obtained a handful of burnt coffee grains from the cooking apparatus; and while in the act of mastication, his sisters older than himself interfered to get the grains from him, through apprehension that it would do him an injury to swallow them. In the resisting struggle on the part of the boy, he sucked a grain, as was supposed, down the trachea. A convulsive strangle followed, though of but short duration.

His breathing became nearly normal when quiet, with a slight wheezing when excited by play or running. The parents were yearning over him with deep anxiety; desirous if anything could be done to attend to it without delay.

I could discover no traces of the foreign body in the passag way to the lungs. It appeared from examination to have followed one of the ramifications of the trachea to the front portion of the right lung. I advised an emetic and to wait the development of the case rather than resort to an operation in his then condition. The opinion of some one or two others confirmed the parents in this course. The emetic operated thoroughly but without removing the offending mass. The child continued cheerful, with but little suffering up to the 15th of December following, when I was called to visit him again.

I found him suffering with direct symptoms of pneumonia. I did not advise an operation, but met in my usual way the symptoms of inflammation as they presented themselves. I was involved in a very serious case, but had the happiness to observe the inflammation subdued in about the usual time for pneumonia to subside. As I still discouraged an operation in his enfeebled condition, the parents became uneasy and called Dr. Fuller of this city in council. It was then decided satisfactorily to the parents to delay the operation until symptoms of loosening of the mass became apparent.

The child continued to improve up to the 7th of January 1860. nearly four weeks from his attack of pneumonia; when I was sent for in haste. I found him struggling convulsively in great distress; with indescribable anxiety. I gave him an emetic which operated almost instantaneously; and tried without benefit various manual means to cause him to throw off the offending substance. He appeared to be suffering under an onset of acute laryngitis, and it appeared evident that he must die for want of breath. Trachiiotomy was resolved upon by advise of Dr. Toles, who was called in council. While preparing for the operation, the distressing paroxyism partially subsided. The child breathed with comparative ease. Further treatment was deferred until next day. On the day following Drs. Toles and Newman were present with myself. Another paroxyism of strangling and distress come on about the same time as on the day before. We resolved as the only remaining hopeful means of preserving life to open the This was done, after administering chloroform to partial anæsthesia in the usual manner by Dr. Toles. The incision was instantly followed by a spout of mucus and semi-purulent matter; and then in a struggle of apparent effort to cough, a burnt coffee grain of the usual size jumped from below the orifice out on to the table on which the child was laid. It seemed apparently a fruitless effort to keep the child alive until the following morning. He could not breathe by the natural passage, and it seemed almost impossible to clear the lungs of mucus through the opening. On the following day he became more tranquil; and by constant watchfulness in about ten days we were able to close the incision in the trachea. The child has recovered gradually from his suffering condition to a fine degree of health.

CAN IODINE REVIVE MERCURY LATENT IN THE SYSTEM.

Dr. Bache desired to call the attention of the College to the question of the influence of iodide of potassium upon workmen in mercury and lead, and upon persons who had taken medicinal preparations of those metals. It is asserted, said Dr. B., that in such cases, the urine is found to contain a compound of the metal with which the system has been more or less impregnated, and that hence, when such metallic preparations have been for a long time taken, iodine must be cautiously administered. In the case of mercury, for instance, iodine is said to develop mercurial salivation with great facility. The iodine is supposed to unite with the metal deposited in the tissues, to render it soluble, and consequently to renew its activity. The facts of the case must be admitted, and the theory is plausable. It must, therefore, be presumed that when the system is thus saturated with either of the metals mentioned, but mercury in particular, the iodide of potassium ought to be very cautiously administered. In like manner, when common salt is given to persons who have taken the milder preparations of mercury, a bichloride will be formed with whatever of the metal remains in the tissues, and may produce salivation.

Dr. Jackson refered to a case which he had already mentioned to the College, and which helps to illustrate the subject under discussion. A lady who had been taking blue pill, removed to the country where she began to use the iodide of potassium in doses of five grains, three times a day. After taking three or four doses she was salivated, and the medicine was suspended. When the symptoms had declined, it was resumed, and again produced the same effect.

Dr. Bell called attention to a class of cases in which the mercurial action was developed by the operation of physiological causes alone, such as cold, fatigue, etc., He had sometimes been struck with the rapid cure of syphilis where iodine was administered after mercury, and that not where full doses, such as five grains, but small and even minute quantities, were given. Yet it was not necessary here to invoke the operation of a chemical law; the physiological operation of the iodide appeared to him sufficient to account for the results.

Dr. Page had repeatedly seen tenderness of the gums and even salivation produced by this salt, and in many of such cases no mercury had been taken, except, perhaps, in the way of a purge: but none, certainly, to impress the constitution. He doubted the proposed explanation of the ptyalism which sometimes follows the administration of the iodide of potassium. This ptyalism differs from the mercurial, and is notably in the circumstance of its being unaccompanied with the so-called "mercurial fœtor." Besides, nitric acid will produce salivation, and perhaps other agents still. He regarded the chemical hypothesis in the case as altogether gratuitous. If lead or mercury is retained in the tissues, it must either be quiescent, or, on the administration of the iodide, be dissolved and excreted with the urine. In the one case, it is innocuous, and in the other, it passes out of the system. lieved the iodide of potassium to possess an independent and powerful physiological action whereby it restores a healthy activity to the impaired functions.

Dr. Evans had never been able to believe that iodide of potassium developed the constitutional action of mercury. On the contrary, he knew that the salt in question was one of the best agents for checking ptyalism. Besides which, he felt sure that the iodide would of itself produce salivation. He referred to the case of a female who had never made use of any mercury, except as a cathartic; but who, on taking the iodide of potassium, became affected with a copious secretion from the Schneiderian membrane, and then from the salivary glands.

Dr. Condie had repeatedly seen tenderness of the mouth and ptyalism produced by this salt, and that without the possible intervention of mercury, as none had previously been taken. Be-

sides, salivation by the idodide is peculiar, it produces no feetor of the breath. Salivation may likewise be caused by nitric acid, accompanied by swelling of the gums and of the salivary glands.

Dr. Jackson referred to the cases of Melsens, among which were some of paralysis cured, where the iodide of potassium developed salts of lead and mercury in the urine, although preparations of these minerals had not been taken for a long time before.

Dr. Neill called attention to the fact that metalic mercury has been found in closed cavities of the body after death. He had himself met with one case where a considerable amount of mercury was discovered within a bronchial gland. No history of the subject of this case was attainable.

Dr. Jackson had also found metalic mercury in the brain of a man who had been accustomed to inhale the fumes of this mineral.

Dr. H. Hartshorne, passing to another subject, suggested that water, heated in copper boilers, might become poisonous. He had, in one family, observed symptoms which he could not account for, except upon this supposition.—*Transactions of the College of Physicians*.

BOOKS, PAMPHLETS, ETC.,

BY THE EDITOR.

This month has furnished me quite a number of very valuable publications. First and foremost among which, the country will rank Dr. Worcester's great *Dictionary of the English Language*. It is a gigantic work, and one the nation may well be proud of. Its great superiority over its would-be rival, will become more and more manifest as the people compare the two.

In all that constitutes a Dictionary of the language, it is very full, complete, and more perfect than could have been anticipated.

In a medical journal is not a proper place to discuss the merits of such a work, but in justice to the profession, I must say to all who have not already purchased it, that they cannot afford to do without it. I have all or nearly all the English Dictionaries sold in America, and this is the only one that is satisfactory to me.

Its general mechanical execution, paper, typography, illustrations, and binding, are every way superior, and a very great credit to the publishers, Hickling, Swan & Brewer, of Boston. The Price is \$7.50

Prof. John J. Elwell, M. D., of Cleveland has sent me his work on *Mal-practice and Medical Evidence*, one of the most valuable professional works published, both for the Medical and the legal profession.

Too often have I blushed for those of my own profession when called to testify in courts of law. Physicians have known too little of law, and lawyers have apparently known nothing of the science of medicine; and hence there has frequently been a mutual misunderstanding, to the injury of all parties.

This work, having been written by one who is both physician and lawyer, does justice to both professions; and is thus possessed of a value greater than any other similar work in the language. It should be carefully studied by every medical student as well as every practitioner of medicine. Its price is \$5.00.

The Publishing House of Lindsay and Blakistone have sent through Robert Clarke & Co., of this city, their republication Althaus' Treatise on Medical Electricity, a valuable work, showing the very great remedial power of the Imponderables in the treatment of neuralgia, paralysis, and other diseases.

The interest of the profession is becoming awakened again to the value and practical utility of electricity, and particularly of galvanism, in the treatment of disease; and doubtless will welcome this work of Dr. Althaus, or any other, on which they can rely for correct information and specific directions for its application in the cure of disease. It is of special value as leading the way for a more definite, larger, and fuller work, which will be demanded ere long.

I have also received from Lindsay & Blakistone, through Robert Clarke & Co., a reprint of the second edition of *Dixon on the Diseases of the Eye*, which was first published in 1850. This edition is a corrected and improved one, and is an admirable companion to Jones's Ophthalmic Surgery. I would advise physicians to procure the two works here named in preference to any

one more expensive, unless they desire to be in possession of several.

Rickey, Mallory & Co., of this city have handed me Dr. Mann's Guide to the Knowledge of Life; as published by C. S. Francis & Co., of New York. It is a most admirable popular treatise on Physiology, containing in a small space, nearly everything in regard to science which the people need to know. Such works are rapidly multiplying, to the very great advantage of the people.

Prof. J. W. Hoyr, Secretary of the Wisconsin State Agricultural Society, has sent me Vol. V. of the Society's *Transactions*, a beautiful volume devoted to the agricultural interests of Wisconsin. Such works are interesting to the physician as well the farmer, and will always profit the reader.

Prof. Moses Gunn, of Ann Arbor, has favored me with a valuable pamphlet on the *Luxation of the Hip and Shoulder Joints*, and the agents which oppose their reduction. I quote:—

"The practical rule to be drawn from the doctrine here laid down, is one which will apply to all dislocations; but in those of the shoulder, and particularly those of the hip, it is of almost imperative importance. It is this: For the easy reduction of a dislocation, the dislocated limb should be placed in exactly the position which characterized it at the moment of the escape of the joint end from its normal position in the joint."

Prof. D. H. Agnew has sent his Valedictory Address to his Anatomical Class, and I am very sorry to learn from it that he allowed himself to continue the excitement which agitates the country, politically, at the present time. Better leave that matter to the demagogues.

AssarceTida and Aloes in Ascardes.—Dr. Nathan Smith states that during a practice of more than forty years he has never known assafcetida and aloes to fail of an immediate cure. He has usually employed the tincture, sometimes clearing out the bowels first by a smart purgative.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

Acids will be found very beneficial when the digestive powers are weakened from want of the normal activity of the stomach. The stomach, when its action is strong and normal, secretes a considerable amount of gastric juice, which is acid; and this acidity is necessary for the solution and digestion of food. If the amount of acid furnished by the stomach be less than the normal amount, the alkalies in the blood will neutralize so much of it that what remains is insufficient for the purposes of digestion. Or, the alkalies in the blood may have neutralized so much of the acid in the blood that the enfeebled stomach is able to obtain but a scanty supply by its secreting organs. In either case the digestive function will not be properly performed.

When such a condition of the system is the cause of derangement of the organs of digestion, or dyspepsia, the administration of some one of the vegetable acids will supply the deficiency; and the stomach being thus artificially supplied with the necessary agents, will be able to digest the food without pain or inconvenience. The mineral acids might perhaps answer an equally good purpose with the vegetable acids but that of all them except hydrochloric acid are astringents, and might prevent the free secretion of moisture into the stomach necessary to enable that organ to perform its functions with ease and rapidity. Hydrochloric acid, being a most powerful solvent, might be found pref-

erable in some cases to the vegetable acids.

If it be ascertained that the dyspepsia is owing to a deficiency of gastric juice,—acids, and not alkalies, will be demanded for the removal of the disease. And, although, after the food may have been for a considerable time in the stomach, it may ferment for the want of the gastric juice and an alkali may be useful to prevent fermentation, still an acid must be administered before the

diseased condition can be removed.

The Refrigerant action of acids may be explained in accordance with established chemical laws. It is now well ascertained that in proportion as the blood is alkaline will be the rapidity of its circulation; and of course as it is less alkaline than natural, will the flood be retarded, and the activity and force of the propulsive power lessened.

In all febrile disorders, and in all inflammations, there is an oxidation of the nitrogenized tissues going on, from which the urea and urate of ammonia is formed, which gives the strong odor to the urine. This oxidation may be owing to there being an excess of oxygen in the system: but is usually continued because there

is not sufficient alimentary matter supplied by the stomach to neutralize the oxygen; and this great destroyer, acting in concert with the alkalies, tends rapidly to destroy the tissues. The usual material which oxygen acts upon when the system is in a state of health, is the food; and as but little of that is taken during fevers, the deficiency of carbonaceous matter for oxidation is supplied by the structures of the system. The oxidation which should take place from the oxygen, should be that which changes grape sugar, or glucose, to lactic acid, and finally into carbonic acid; but as there is no starch taken into the stomach as food, there is no material furnished for the oxygen to work upon; and the animal heat is maintained by the burning up of the vital tissues.

As there is but a small amount of the material for forming lactic acid in the system, there must be a deficiency of that material present, and anything which shall take its place and prevent its being burned up will prove a preservative; and if the lactic acid accumulates because of the presence of such a medi-

cine, the medicine may properly be styled a Restorative.

As the lactic acid is deficient in quantity it cannot neutralize as much alkalinity of the system as it would if its quantity was normal; and hence the blood in febrile diseases is found after a few days to have become more alkaline than in a state of health. If a vegetable acid be given in these cases, it will combine with the alkalies as lactic acid would have done, and it will be burned up in the place of the lactic acid. In this process also the acid acts as a restorative. As it lessens the alkalinity of the blood by allowing the lactic acid to accumulate, it diminishes the rapidity of the flow of the blood and the number of respirations, directly lessening the amount of oxygen inspired, and reducing the temperature of the system. As the burning process is removed from the tissues to the acid medicines taken, their farther wasting away is checked, and the structures preserved.

This explanation is in perfect accordance with the almost universal demand for acid drinks and acid or sub-acid fruits on the part of fever patients after the disease has continued long enough for the lactic acid formed of the starch in the food to be nearly

all burned up.

When these acids are combined with alkalies in the form of effervescing draughts, they are much more cooling and grateful if the acid is in excess so that the patient wishes the acid taste modified by the addition of sugar, which, however does not lessen the medicinal power of the preparation, as the sugar is readily changed to lactic acid, or to carbonic acid, and passes from the system.

The neutral salt which is formed by a vegetable acid with the alkali in the effervescing draught, is changed to the carbonate of the base by the oxygen, and they act on the system, and on the secretions as alkalies. By this process, the acid aids in changing the lower to the higher salts of oxidation, as in changing lactic to carbonic acid, and the alkali which was administered in connection with it remains in the system if it is demanded as a restorative, or it is excreted from the kidneys to which it is a special stimulant. Hence these effervescing draughts have a double action, and are catheretics, or solvents, as well as restoratives.

As will be perceived from the foregoing, the principle use of acids in medicine is to act as Restoratives, although they are sometimes given as catheretics, when there is an excess of some one or more of the alkalies. They are also given as Antidotes when an over-dose of an alkali has been taken, to counteract the poisonous effects of the corrosive poison. When ordered for this purpose that acid should be selected which when united with the base will form the most soluble neutral salt, and thus will be the most readily excreted from the system.

The peculiar action of the individual member of this order of medicines are properly considered under their own proper names.

Acid, Abietic. Pinic acid. Silvic acid. Obtained from Frankincense, or the tears of Burgunday pitch, by Caillot.

ACID, ABSINTHIC. An acid obtained by Braconnot, from an infusion of Wormwood, by precipitation with the acetate of lead.

Acm, Aceric. Acetic Acid, which see.

ACID, ACONITIO. Aconitic Acid, obtained by Buchner from the juice of the fresh herb of Aconitum Napellas.

Acid, ÆRIAL. CARBONIC ACID.

Acid, Alorsic. An acid obtained from Aloes, and was by

Trommsdorff supposed to be Gallic acid.

Acm, Alpha-Orsellic. Alpha-orsellic acid. Obtained by Stenhouse from the *Rocella tinctoria*, of which it is the calorific principle

Acto, Amygdalic. An acid found by Liebig and Wohler in the

bitter almond.

Aoid, Anacardic. Anacardic Acid. Obtained from the pericarp of Cashew nuts, by making an etherial tincture, evaporating, and treating the residuum with water to separate the Tannic Acid, dissolving in alcohol, and then digesting with hydrated oxyde of lead. The Anacardate of Lead is then decomposed with the sulphuret of ammonium, and the Anacardate of Ammonia is decomposed by sulphuric acid. The impure Anacardic Acid is purified by washing with water, recombining it with lead, and decomposing it with dilute sulphuric acid.

Acid, Anchusic Acid. Obtained from the Alkanet root.

ACID, ANGELICIC. Angelicic Acid. Obtained from the roots

of Angelica, Masterwort, and perhaps some other plants.

Acm, Absence. Arsenic Acid. Formed by the combination of Metallic-Arsenic with oxygen. Mentioned by Macqueer, but afterwards mentioned by Scheele. It is not used in medicine, but several Arseniates are, which see.

ACID, ARSENIOUS. White Arsenic. See Arsenic.

ACID, ASPARATIC. An acid residing in the root of the Marsh Mallow, or made by acting upon Asparagus by means of a watery solution of an alkali.

Acid, Atropic. Name given by Richter to a crystalizable

acid found in the leaves of the Atropa belladonna.

Acid, Auric. Ter-oxide of Gold is sometimes called Auric Acid. See Aurum.

Acid, Benzoic. Flowers of Benjamin. See *Benzoic Acid*. Acid, Beta Orsilic. The calorific principle of Cape of Good

Hope Orchella weed. Obtained by Stenhouse.

Acm, Bibliero. Bebeeric Acid. A volatile acid obtained from the seeds of the Biblier or Greenheart tree, by Maclagon and Tilley.

ACID, BOHEATANNIC. Boheatannic Acid. Obtained from tea

leaves. A peculiar form of Tannio Acid, which see.

Acid, Boracic. Boracic Acid. A product of the lagoons of Tuscany. It is seldom used uncombined, in medicine. It is of less value than carbonic acid which it resembles in its therapeutical properties; (See *Carbonic Acid*,) but in combination with Soda, as the Biborate of Soda, or Borax, it is of value. (See *Borax*.)

Acid, Brazilic. Brazilic Acid. Obtained from Brazil wood.
Acid, Butyric. The Butyric acid in combination with Capric, and Capivic acids is formed the saponification of Butyrine in butter

They give to butter its peculiar odor.

Acid, Caffeic. An acid found by Berzelius in unroasted coffee, Acid, Cahinic. Cahinic Acid. Obtained from Cahinic root, by making an alcoholic tincture, distilling off the alcohol, treating the extract with water, filtering, adding milk of lime gradually until all the bitterness of the solution disappears, treating the Cahinate of lime with alcoholic oxalic acid. When allowed to remain awhile fine needles of Cahinic Acid are formed. The active Urogentic action of Cahinca root seems to reside in this acid. For its use in therapeutics, see Cahinca Root.

Acm, Camphoric. An acid obtained by repeatedly distilling nitric acid from camphor, by which means the latter is converted

into Camphoric acid.

ACID, CAPRIC. One of the three fatty acids found in butter.

ACID, CAPRINIO. Caprinic Acid, Rutinic Acid. Obtained from the butter of cow's and goat's milk. Described by Turpin. Cod-liver oil, eocoanut oil, and the fusil oil of alcohol which has been prepared from the sugar of beet-root, also contain Caprinic Acid. It may be obtained from such alcohol by first washing the fusil oil with a solution of carbonate of soda, sapoifying it with potassa, decomposing the soap with tartaric acid, and dissolving in alcohol, from which it may be crystalized.

ACID, CARBONIC. Carbonic acid. The Spiritus lethates of the

ancients. See Carbonic Acid.

ACID, CARBAZOTIC. Picric Acid, Welter's Bitter. This is usually obtained by boiling nitric acid on indigo. Carbazotic acid has been ranked both as a *Tonic* and an *Astringent*. Dr. Moffat has used it with the idea that its action is identical with that of Quinia. He also gave it in diarrhoea as a sequel to continued fever. It has proved successful where astringents alone had failed of a cure. It has not been used enough to fully determine its action. The dose was one grain three times a day.

Acid, Carbolic Acid, Phrenlyc Acid, Spirol, Salicon. Obtained from castor, and from the urine of many domestic animals. What is usually sold under the name *Creasote* is supposed by Prof. E. N. Kent and others, to be Carbolic Acid, somewhat impure by the admixture of various empyreumatic liquids. In therapeutics this acts the same as *Creasote*, which see—but is

of a less disagreeable odor.

Acid, Carmic Acid. The coloring matter of Cochi-

neal.

Acro, Carminic Acid. By some thought to be identical with Rufiormic Acid, but combined with a little Ammonia. Carminic Acid is the basis of Carmine.

Acid, Carthamic. The red coloring matter of the Carthamis

tinctorius, or Bastard Saffron.

Acid, Carvophalio. Clove acid. Eugenic acid. The Heavy Oil of Cloves. See *Clove*.

Acid, Castoric. An acid obtained by boiling Castoriul with Nitric acid.

Acm, CATECHUIC. The active principle of Gambir. A powerful Astringent. See Gambir.

Acid, Ceoadic. A crystallizable fatty acid found in Cebadilla, or Veratrum officinallis, by Meissner, and Pelletier and Caventon.

ACID, CEPHÆLIO. Cephælic acid, Ipecacuanhic Acid. A very bitter acid obtained from Ipecacuanha root.

Aom, Cerso. An acid formed in the Wax of the Honey Bee by the oxidation of Myricine.

ACID, CETRARIO. The bitter principle of Iceland moss. It is

sometimes erroniously called Cetrarin.

Acm, Chelidonic. Chelidonic Acid. Obtained from the matured Celandine plant- When young, celandine yields Mallic Acid. To obtain it, the juice of the plant is coagulated by heat, filtered, and the filtrate accidulated with nitric acid, then precipitated with nitrate of lead, which must not be in excess. The precipitate decomposed by hydrosulphuric acid, the free acid is combined with lime, the salt crystalized, then decomposed by carbonate of ammonia, and that salt by muriate of ammonia.

ACID, CHLOROHYDRIC. Hydrochloric acid is used in two forms;

gaseous, and dissolved in water. See Hydrochloric Acid.

ACID, CHLORONITRIC. According to Baudrimont, the resultant acid formed by the mutual action of nitric and muriatic acids, in the mixture known as Aqua Regia. See *Nitro-Hydrochloric Acid*.

Acid, Chromic. A nearly pure chromic acid may be obtained by mixing one part by weight of bichromate of potassa, with one-and-a-half parts of oil of vitriol, and allowing the mixture to cool, when the chromic acid forms in ruby red crystals.

It is a very powerful oxidizer and hence has been used as a

local Dissolvent, to destroy the parts to which it is applied.

As it very readily deliquesces and forms a semi-liquid pasty mass, it is very convenient of application, and when properly managed, does not spread beyond the part to which it is applied.

As it readily passes into the state of a sesqui-oxide, it does not destroy the vitality of the deep tissues. It has been applied to external hemorrhoidal tumors, but does not appear in any way to

be preferred in those cases to nitric acid.

Acid, Chrysophanic Acid. When of various degrees of purity also known as Parietenic Acid, Rhein, Rhubarberin, Rheumin, Rhubarbaric Acid, Rhaponticin, and Laputhin. Obtained from Rhubarb root, Senna, and Parmelia paretina, by making a tincture with weak alcohol rendered alkaline, precipitating by carbonic acid, dissolving the precipitate in fifty per cent. alcohol which contains some potassa, precipitating with acetic acid, dissolving the precipitate in boiling alcohol, adding water, and allowing the acid to crystallize.

Chrysophanic Acid, as shown by Prof. Schroff, is the cathartic principle of Rhubarb, but modified in its cathartic action by other constituents of the root. The active cathartic principle of Senna appears to be identically the same acid, but so combined with other matters in the leaf, as to be readily soluble in water, while it is nearly insoluble in strong alcohol. Dr. Martias has not been able to obtain this acid from Senna, entirely freed from Aporetine, Phes-

oretine, and Erythroretine.

[To be Continued.]

EXTRACT OF CANNABIS IN THE CURE OF GONOBEHEA.—Not having seen any prescription of the kind in any of the medical works, I have thought it not amiss to offer for your consideration my experience, of Herrings & Co.'s (40 Aldersgate street, London.) Extract of Indian Cannabis, in the cure of gonorrhea. I was induced to use this remedy by the solicitation of a highly respectable gentleman, of whom I procured the prescription in one of the northern cities. I used the following prescription in four cases of gonorrhea, and was successful in every case in from five to seven days.

R Sugar of milk, 3ss. Ext. Indian Cannabis, grs. xx.

Mix well together, and divide into sixty powders, one to be taken every three or four hours.

This prescription I am persuaded will relieve the most obstinate cases in a short time.—Oglethorpe Med. and Sur. Jour.

A New Divertic.—Dr. Byerley, of Cheshire, England, attributes powerful diuretic properties to the *Erodium cicutarium*, or Storks' bill. He gives, in the *Medical Times and Gazette*, the following directions for its use:—The mode of preparation is, to infuse an ounce of the dried plant (every part of it,) in three pints of water, stewing it in an oven until two pints remain. The dose for an adult is four or five fluid ounces three times a day; probably more may be needed in some cases.

The Storks'bill is indigenous in England, where it grows abundantly on sand-hills near the coast, but it has been introduced into this country, and is to be found on the shores of Oneida lake in the state of New York.

OINTMENT FOR WARTS.—The Repertoire de Pharmacie reproduces from the Allgemeine Medical Central-Zeitung, the following prescription for an ointment strongly recommended by Dr. Blaschko for the destruction of warts:

R. Potassæ chromatis, grs. ij. Adipis, 3j. M.

The excrescences should be rubbed with this preparation twice daily, and in the space of three or four weeks the most inveterate verrucose productions are said to be entirely removed.

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ENTERIC FEVER.

BY THE EDITOR.

Within the present century very much more care, caution, and discrimination has been manifested in the profession, both in the diagnosis and in the treatment of disease, than characterized more remote ages; and the result already is, greater knowledge of the distinctive characteristics and causes of different diseases, and more rational methods of treatment.

In no department of the science of medicine has the profession made greater progress than in regard to the cause, the nature, and treatment of the various varieties of Fevers. It would be presumptious to suppose that nothing still remained for the profession to learn; but assuredly we are already in possession of knowledge that must lead us to discard many of the errors of former times, and to look with hope to still further progress in the further.

It seems fully settled, that while Typhus owes its origin to a specific poison generated by human beings in over-crowded and anventillated spaces, Enteric fever never originates except from the decaying of green vegetable matter in a peculiar state of decomposition. Hence, in many parts of this country, when the forests protected the herbage from the direct action of the sun's rays, and the water of the streams flowed unchecked by the dami of the mill or factory, cases of Enteric fever were never met with; while in the same regions, as the forest is removed, herbage is cultivated, and the courses of streams and ponds which have been covered with a generous growth of vegetables during the summer, are overflowed in autumn, and the green plants are allowed to undergo a peculiar form of decay and decomposition under the water, while they still retain some degree of vitality, Enterie

fever has in a good degree taken the place the Intermittents and Remittents which once prevailed there, and in other instances has entirely superceeded them. Where the former varieties of fever are still to be met with, if cultivation has produced any considerable change in the soil and vegetation, some of the symptoms of Enteric fever are manifested in the remittent or intermittent varieties; while few, if any, cases of pure and uncomplicated Enteric fever are ever observed where miasm still abounds.

But it is those cases of Enteric fever that have been propogated by infection and are met with at a distance from the *origins* of the disease that are still more liable to complications and modifications; so that, it is more than probable that even now, there are very many parts of the country where pure, uncomplicated, Enteric fever has never yet been observed. Pure Typhus is quite rare in the West and South, but the Enteric variety of fever uncomplicated with any other form of disease, is perhaps equally rare in those regions with Typhus.

The typhoid condition, as it has been called, or the state of dangerous debility as the result either of the malignancy of the disease, or of the treatment pursued, or of dietetic errors, is not seldom observed, in dysentery, pheumonia, cholera, and in remittent, billious and other forms of inflammations and and fevers; but the typhoid condition is by no means indentical or even greatly like Enteric fever, which unfortunately for science and for humanity, has been known by the appellation Typhoid ever.

Enteric fever is usually quite insiduous in its attack. Its premonitory symptoms are not such as will lead the unwary to suspect the approach of a severe sickness; very often the patient will complain of having a slight cold, with pain in the bones and head, and a cough or other indications of pulmonary difficulty. Not seldom does the congestion of the head and apparent catarrhal symptoms cause hemorrhage from the nose. At the commencement, the bowels are deranged,—perhaps slightly constipated—perhaps diarrhæa is present from the first. Diarrhæa is quite sure to be present, if not at the commencement of the attack, at least at the end of the first or the commencement of the second week. This symptom, and the condition of the smaller

intestines which causes it, are so uniformly observed as to have given to the fever its appropriate name.

In Enteric fever the patient looks oppressed, and the countenance somewhat heavy, but without the bewildered look so uniformly observed in Typhus. The face does not look muddy, or dusky, and is seldom dull, stupid, or apathetic. The face may wear an anxious look, more anxious than the amount of suffering appears to warrant. The delirium is seldom of the low muttering kind, but is active, and sometimes violent.

When diarrhee has not been manifested early and spontaneously, it is quite apt to follow the administration of a dose of purgative medicine, and when once present is quite difficult to check and control. From the first appearance of diarrhee, pain in the abdomen will be felt preceeding and accompanying each evacuation. The stools are usually watery, loose, frequent, feetid; at first perhaps light yellow, but soon changing to a greenish color, and eventually becoming quite dark and very tenaceous to the chamber vessel.

The abdomen is somewhat tender even from the first, resistant on pressure, its walls appear to be stretched, thinned, but harder than natural, tympanitic, at times greatly distended, and of a peculiar shape, the colon appearing to be greatly distended with flatus. If considerable pressure is made upon the abdomen, and particularly over the execum, pain will nearly always be felt. Sometimes from the very first, and nearly always in the more advanced stages of the disease, a gurgling may be felt, and sometimes heard, as of gas and fluid, in the execal region.

As the disease progresses the diarrhea grows worse, with from four to at times from ten to twenty evacuations in twenty-four hours. It the patient has bed-sores and the discharges from the bowels are allowed to come in contact any way with the abraded surface, the contact is sure to cause great suffering. After the first week the patient does not complain of much pain in the abdomen although the tympanitis continues; but pressure over the excum still causes distress. The discharges of the bowels, during the second week, still remain thin, yellowish, with perhaps a green tinge, and slightly flocculent. Even during the second week hemerrhage of the intestines may occur, causing a change

in the appearance of the stools, either as of fresh blood diffased through the mass evacuated, of clots of blood, or of decomposed blood mixed with the passages.

Hemorrhage may be produced because the ulcerations which have commenced in Peyer's glands have extended so as to lead to a rupture of a branch of the mesenteric veins, or by a rupture of the vessels in an ecchymotic or bruise-like blotch from a depression of the vital forces. If produced in the manner last named the hemorrhage will be of a passive kind, but very per sistent, and the patient is quite likely to die. This kind of hemorrhage occurs when the blood has become so diseased and vitiated that it erodes the coats of the veins, weakening them, allowing them to be stretched, distended, and ruptured.

The eruption in Enteric fever does not generally appear until some ten days or even two weeks after the invasion of the disease. It appears as little circular spots of a bright rose color, without a distinct margin, but with the color fading gradually until it assumes the hue of the surrounding integument. The spots are slightly elevated, with a rounded head, not vescicular, and never petechial. The color of the eruption at all times can be made to disappear completely on pressure. After an eruption has appeared it remains about three days and then disappears to be succeeded by others. Usually there are from five to thirty spots present at one time. Sometimes but one or two can be discovered, while at other times they are quite numerous. New eruptions continue to present themselves for a week or more; and in case of a relapse, they appear as in the primary attack of the fever. If the patient recovers without a relapse no new eruptions occur after the end of the fourth week. They entirely disappear on the death of the patient. The eruptions of Enteric fever have been likened to flea bites, but even ordinary observation will enable any one to distinguish between such bites and the eruption, as the round red spot, with a dark point in the centre, does not closely resemble the rose colored spots of Enteric fever.

The tongue, in Enteric fever, is often moist almost throughout the disease; but when it becomes dry it is red and glazed. By Dr. Jenner, the tongue in Enteric fever has been described as small, dry, with red tip and edges, smooth, furred, of a pale

brownish yellow, fissured, and with the surface as seen between the fissures of a deep red. In this country, where the disease is almost always complicated by the presence of miasmatic poison, such an appearance of the tongue is very rare.

In Enteric fever, the majority of the fatal cases survive three. weeks, while with those who finally recover, the fever may continue four weeks, and the sickness many more beyond that number.

Post mortem examinations, have established what many of the symptoms during life have indicated, that the little follicles of the intestinal canal, sometimes called Brunner's glands, and the other: groups of follicles described by Peyer and called Peyer's glands, are found to be diseased; and that this disease of the follicles of the intestine has given to the disease some of its most characteristic symptoms, and its proper name.

The enteric follicles become enlarged, perhaps reddish, ulcerated, with irregular and thickened edges to the ulcer; or if a patch of follicles are affected, the patch swells, is puffed up, and appears as a fungous growth, with a pale gray or yellowish surface. During the progress of the disease, there is tenderness in the region of the execum; and after death it is observed that the follicles in the region of the execum are more commonly and more extensively ulcerated than elsewhere, and that the ulcers are deeper, the disease has made farther progress, and is more persistent than in other parts of the intestines. The ulcers often have produced disease in the corresponding mesenteric glands, doubtless resulting from the absorption of poison from the intestinal ulceration.

The disease of the intestinal follicles readily accounts for the obstinate diarrhoa, the hemorrhage, the pain and distress in the abdomen, the tenderness in the cæcal region; and if the ulceration penetrates through the intestinal walls, they also account for the sudden deaths that sometimes occur. When the ulcerations heal, they are liable to prolong the convalescence of the patient even when the fever has passed away, and also to produce those relapses that so frequently follow errors in diet.

The Treatment of Enteric fever unlike that of Typhus, usually commences before the patient is confined to bed. The pain,

and swelling in the abdomen, together with the cough and diarrhoea with which the disease is frequently ushered in, may lead both the patient and physician to suppose those symptoms are simply the result of exposure, or of an ordinary cold, and to be treated accordingly. But a little experience with care and close examination will commonly prevent the medical attendant from falling into that error.

Let the patient still wear his ordinary garments through the day if he is not already confined to his bed; but enjoin quietude and the horizontal position as much as possible. Let the head and face be bathed often with water slightly warmed, in which there is some alcohol; the surface not wiped, but the water allowed to evaporate, or the evaporation hastened with a fan. The entire surface should be sponged over with tepid water and alcohol often, and this treatment continued during the whole course of the disease.

An infusion,—cold, if preferred—of some aromatic herb should be used as a constant drink. Neither an emetic nor cathartic will usually be required; and even a mild laxative has been known to cause a diarrhœa, or to so change the action of the bowels as to lead to a most distressing and uncomfortable diarrhœa. If an emetic is required it should be given during the first day of the disease, and always either of ipaccuanha, or of common table salt. If a cathartic is imperatively demanded, rhubarb is to be chosen; except during convalescence, castor oil combined with a little oil of turpentine may be preferable. The most ardent advocates of bleeding have found blood-letting always injurious in Enteric fever.

Diaphoretics may prove useful, but the infusion of aromatic herbs, or small doses of ipecacuanha, camphor, and opium, as hereafter named, will be found far more useful than those usually resorted to. Cold, or tepid, sponging—bathing of the surface, with an effervescing draught of citrate of ammonia conveniently prepared by adding the requisite amount of carbonate of ammonia to lemonade, will be very grateful to the patient and useful as therapeutic measures.

To act as a diaphoretic, to quiet the action of the heart, allay the undue excitement in the stomach and bowels, and check the diarrhoes, as well as to sooth the patient to rest,—a combination of ipecacuanha, camphor, and opium, prepared as follows, will be found very useful during the entire course of the disease.

Re Opium, pulv. grs. iij. Camphor, "grs. vj. Ipecacusnha, "3ss.

M

Divide into thirty powders, and give one powder once in two hours during the day, and two powders at once in the early part of the night.

If the above mixture does not keep the pulse sufficiently quiet, a little tincture of gelseminum or of veratrum viride may be given when required. Usually gelseminum is prefferable to veratrum viride as it is not liable to increase the action of the bowels. If the ipecacuanha in the above named powders causees too much nausea,—or if it or the opium, or both together act too much on the nerves, the powders may be substituted by or alternated with Dr. Hope's Camphor Mixture, so highly lauded by Dr. Mackintosh and others in diarrhæa and dysentery. The mixture is made as follows.

R Acidi Nitrosi, f3j. Opii. Tinct. gtt. xl. Aques Camph. f3viij.

M

Of this a large spoonful may be given in place of the powders once in two or three hours. This mixture will be found especially useful where there is a tendency to somnolency with subsultue tendinum on waking.

Where there is considerable tenderness and swelling of the abdomen, and even perhaps some hemorrhage, as shown in the stools, all indicating severe inflammation and ulcerations of the follicles of the small intestines, the oil of turpentine, or the muriate tincture of iron, with perhaps very small doses of castor oil, may be demanded. But even after it is determined that ulceration has made considerable progress, cathartics, or even laxatives, that produce much peristaltic movement in the bowels, should not be administered. It is better to let the patient rest without a fecal evacuation several days even than to risk an increase of the ulcerative process that may produce perforation of the intestine or the walls of a mesenteric vein. The oil of turpentine seldom should be given before the middle or close of the second week of

the disease. Then the tongue becomes dry and there are other indications that ulcerations have commenced. Ten drops of the turpentine at a dose, and repeated once in three or four hours, will suffice.

Alcoholic preparations, which are at times so imperatively necessary in Typhus fever, should be very seldom given in the early stages of Enteric fever. So long as the mucous membrane of the intestines or its follicles are in a state of active inflammation, even the little amount of alcohol which enters into the formation of tinctures may do harm. For the same reason that all observant and judicious physicians avoid alcohol in Dysentery, should its use also be avoided in Enteric fever, at least until convalescence is well advanced.

The diet in Enteric fever should, in the earlier stages, consist more of shielding, soothing, bland fluids, than of nourishment. Gum water, barley water, toast water, rice water, weak gruels, vegetable jellies, preparations of fruit, the juice of grapes and of oranges, lemonade, orangeade; to be followed with preparations of sago, tapioca, ochra, oatmeal, isinglass, arrow-root; thicker gruels, panada, a little dry toast, cracker morning and evening with a cup of tea; boiled milk, mutton broth, beef tea, boiled custard, animal broths of various kinds, animal jellies; the flesh of a wild fowl, game, fish, mutton, beef, with the addition of a few carefully prepared vegetables, may serve to make convalescence safe and complete.

During the entire course of the disease, the utmost care must be taken to ensure complete cleanliness of the person of the patient and everything in the room. The sick chamber must be constantly and thoroughly ventillated, all soiled articles of clothing, and all evacuations must be removed at once. No articles of food, of drink, or of medicine, must be allowed to remain in the sick room to absorb the fomites of the patient.

A German writer of celebrity, said of this fever:—"The obstruction of the bowels which is often present in the commencement of the disease may, by the injudicious use of laxatives or catharties, be changed to a severe and unmanageable diarrhea. Many physicians have, by ordering purgatives, made it necessary to order a coffin also.

"The treatment of the Enteric fever adopted by the physicians of Vienna seldom embraces either emetics, cathartics, or wenesection. They give an infusion of a few grains of ipecacanaha in the congestive or nervous stage, together with chlorine water, a little dilute aromatic sulphuric acid in the evening; and where there are severs exascerbations with an appearance of intermitting, they give about four grains of quinia daily. For the diarrhosa they prescribe alum. When the skin remains persistently hot and there is great prostration, particularly if there is profuse diarrhosa, they give camphor and alum by the month and in injections."

"If the disquiet and restlessness continues but is more marked during the night; and especially if there be a bloody diarrhoea, they give musk and camphor in injections. They also apply, as indicated, cold water to the head and cold washings to the whole body made of equal parts of water and vinegar, so long as the skin remains hot and dry. For the purpose of hastening convalescence they lay great stress upon tepid bathing. This course I consider progressive and RATIONAL treatment."

Complications.—Not aeldom is Enteric fever complicated with inflammation of the brain or the lungs, and the peculiar symptoms of such inflammation should at once arrest our attention. Bronchitis, pleurisy, erysipelas, peritonitis, and other forms of local disease may also be met with.

Quite often, in the West and South, miasmatic influences complicate this fever, so that from the very first quinia seems to be absolutely necessary; so necessary that some have supposed by it the fever could at once be subdued. There can be no doubt that very many cases of fever having many of the characteristics of Enteric fever complicated with miasmatic symptoms, where the febrile symptoms have been very severe, have yielded at once to the free use of the sulphate of quinia alone or given in combination with the tincture of gelseminum, or the tincture of veratrum viride, and camphor.

Sixty grains of the sulphate of quinis may be dissolved in two fluid drachms of tincture of gelseminum, or in one fluid drachms of tincture of veratrum viride, and one tenth of the mixture

may be given to the patient once in two hours until the febrile symptoms abate; and then the dose lessened in its amount or in its frequency of repetition as the exigencies of the case demands. Perhaps this course will subdue the disease at once and particularly in miasmatic regions; but at present it should never be adopted except under the immediate supervision of the physician, who may discontinue it, or modify it, as required.

- During convalescence, the utmost caution must be exercised to secure a proper diet and regimen. But little food should be taken at a time, but the meals should not be more than three or four or five hours apart: and as convalescence progresses the food should be of such nature as to ensure one or more fecal evacuations each day. Extreme caution is also required to prevent the patient from taking too much physical and mental exercise. Weeks may elapse ere the patient is entirely free from danger from these sources. During convalescence, many observant physicians have thought salicine to produce a peculiar beneficial effect upon the stomach and the functions of digestion. As the disease is one of the digestive organs as well as of the blood, the utmost care must be taken to protect/the alimentary canal from all harmful irritation or injury; and Aromatics and Tonics, in moderation, should be used continuously for weeks and perhaps months, until the system is completely restored to its wonted activity and vigor.

PATHOLOGY OF THE MOUTH.—EXCESSIVE FORMATION OF EPITHELIUM.

BY C. H. CLEAVELAND, M. D.

Chronic excess in the quantity, and unusual tenacity of adhesion of the epithelial scales of the mouth, occurs in some persons, but this disease is not very common. Persons thus affected, even while in ordinary health, have a thick yellowish coating upon the back part of the tongue. On the advent of any morbid derangement of the digestive apparatus, the coating covers the tongue quite to its tip, appears white, and uniformly distributed. It is a disease that is more frequently met with in those whose skin is

inactive, with derangement or obstruction of the sebaceous felicles.

Treatment. Although this derangement does not produce much active distress, yet the disease that produces it demands treatment, which, however, consists in avoiding the producing causes rather than in active medication. Smoking tobacco always increases this trouble, and the accompanying distress at the pit of the stomach. Opium, as well as tobacco smoking, produces this kind of furred tongue in well persons, and where the condition already exists neither tobacco nor opium can well be borne.

ACUTE INFLAMMATION OF THE MOUTH.

Acute inflammation of the lining of the buccal cavity, when not produced by local agents, like similar acute inflammation in any other part of the system, seems always to be a result of a previous derangement of the fluids of the system.

The papillæ become swollen, prominent, do not shed their epithelium, which becomes harder and more tenaceous than natural, and rising with the papillæ gives them the appearance of being short hairs, and the tongue of being furred, and not simply coated as where there is only an excess of epithelium.

When the tongue is furred it indicates that a febrile or inflammatory change has occurred in the blood, and that the whole system is affected with a disease for the cure of which general treatment will be required. The derangement of the alimentary canal may also be great, and require special attention. But a furred tongue always indicates a change in the fluids of the body.

Treatment. In the treatment of acute inflammation of the mouth, the derangement of the general system, and consequent demand for general treatment, must never be lost sight of.

When the mucous membrane of the mouth and stomach is inflammed, there appears to be a difficulty in regard to the transmission of fluids through the membrane; and hence the system suffers from a deficiency of fluids and the thirst of fevers is felt; often the sense of thirst leads the patient to drink copiously, but the fluid drank not being absorbed from the stomach, passes into the intestines and thence out, causing purging or a continous: diarrhosa. When the evacuations are produced by the non-absorption of the drinks, it is not proper to check them; for, in addition to relieving the stemseh of its superabundance of liquid, it washes away the epithelium which has been shed as well as any other effete matter that has found lodgement in the alimentary canal. As in the treatment of Catarrh, so in this form of disease, the cautious and proper use of laxatives and diluents at a heneficial and rational.

So, also, the use of agents that increase the amount of flow through the kidneys and the skin will not only lead to an increase of absorption from the mouth and stomach, but at the same time lessen the inflammation and tend to cleanse the tongue of its fur. Blood-letting will sometimes apparently cleanse the tongue; but if it produces any notable debility bleeding causes the coating to become sticky, smooth, thick, and of a brownish color, and dryer. The stain produced by medicine or food upon the tongue may be mistaken for the changed condition here referred to; but with proper observation and thought such mistakes are not likely to occur.

Inflammation of the mucous lining of mouth may occur in Catarrh, but such attacks are transient and require no special treatment. Usually more attention must be paid to the general condition of the system that caused the local disease than to the mouth itself.

· ANÆMIA OF THE MOUTH.

THE Ansemic state of the lining of the mouth is more readily distinguishable by the appearance of the sub-epithelial blood-vessels than by the changes it produces in the epithelium or the papillee.

The first change noticed may be that the tongue is somewhat swollen or tumid, and the papille appear enlarged. The epithelium appears nearly white as though the tongue was purboiled, thickened, soft, wrinkled, forming furrows, with a large number of epithelial scales floating in the saliva, giving it a whitish opaque appearance and an unpleasant taste. The breath has a peculiar unpleasant odor, doubtless also caused by the decomposition of some of the epithelial scales a large amount of which are floating in the saliva or adherent to the teeth.

After the disease has progressed, the tongue becomes smoother and clean, the epithelium not having been formed as fast as washed away; the papillæ are flattened, the surface of the tongue quite smooth, the breath looses its unpleasant odor, the tongue becomes pale, flat, and so broad that the edges press against the teeth which make indentations in its border and its tips that re main quite a long time.

The anæmic state of the tongue always indicates a general, not local disease. Local diseases, even of the stomach, do not produce this anæmic condition of the mouth. Ulceration, and even cancer of the stomach or esophagus do not lead to this condition. Neither do derangements of the liver, the spleen, the kidneys, nor of more distant organs.

Sore throat, bronchitis, a decayed tooth, may, however, greatly modify the appearance of the mouth and tongue; so that it is always well to observe if there is any immediately adjoining disease that modifies the appearance of the tongue. So, also, if there is such disease of the teeth upon one side of the mouth as to cause the other one to be used exclusively in mastication, the epithelium not being worn away upon that by the food, may give it the appearance of being diseased even in a state of health. The use of tobacco causes such a modification in the appearance of the mouth and tongue that its influence should never be lost sight of. So also does the habitual presence of many other things in the mouth; and it is well, always, to become acquainted with the habits and occupation of all whose mouths we are called upon to inspect.

WHITE LEAD PAINT, AND WHISKEY, IN CUTANEOUS AFFECTIONS.

BY PROF. T. J. WRIGHT.

Several years since my attention was drawn to the former article under consideration, from reading in a medical Journal a highly enlogistic notice of its local application in burns and scalds. Since then I have had several opportunities to witness patients undergoing treatment by it, both in private and public practice. And in every instance the persons thus treated have done as well

if not better, than they could have done providing they had been submitted to the action of any of the numerous simples or compounds which have from time to time been used and recommended by the medical profession.

In addition to the cases that have come under my own observation, I received about a year since the report of a case treated in the State of Illinois, by a friend, of a very extensive burn, in which white lead paint alone was used as a dressing. And so well pleased was my friend with his success in the case that he was induced to speak of the paint in terms of high commendation.

Still later, another mode for the management of burns has been reported to me by a very able practitioner of an adjoining county, who had a case under his charge in which the greater portion of the body was involved, which was treated with cotton wool soaked in whisky and applied to the burnt surface; and so complete was the recovery thus obtained that the most fastidieus could not advance a reasonable objection to its application. This mode of treating burns has advantages over many others. It is free from offensive odors of any kind; and in addition, the wool can be readily removed as often as required without exposing much of the burnt surface at any time, or annoying the patient but little; and it makes just as good a shield as many of the popular liniments or ointments so generally relied upon. Besides, it is a far cleaner dressing, and less objectionable on that account than any other with which I am acquainted.

It occurred to my mind before I had an opportunity to test its effects, that whisky in any form might be too stimulating when brought in contact with a surface just deprived of its natural covering. In this, however, I was happily disappointed on trial. As soon as applied, and for a few minutes afterwards, the patients in every instance complained of a slight degree of smarting, yet not at all disagreeable when compared with the pain experienced so long as the parts were exposed to the action of the atmosphere. After which the smarting subsided, when the patients felt as comfortable as could be expected from any dressing, no matter how appropriate and soothing to the surface.

It is frequently the case that accidents occur to persons from fire and hot water, at times and under circumstances very unfa-

vorable for their proper treatment. Providing a keg of white lead paint should be at hand—one of the very best articles that could be desired—it can in a very short time be spread over the affected parts and the sufferings immediately alleviated. Its use should be confined however to burns and scalds of the first and second classes.

Paint is not confined in its range of application to burns and -scalds alone: but may be, as it frequently has been, applied to a great variety of cutaneous diseases. In erysipelas, a disease of frequent occurrence, it appears to act like a charm, its beneficial effects are so strikingly manifested soon after its application. In all the cases that have come under my notice—and they have not been very few in number-it has produced the most salutary effect. With the exception of erysipelas and boils, paint manifests its benign influence in a higher degree in the numerous forms of eczems, than any other; calming the irritation and subduing the inflammatory action so annoying to persons the subjects of this intractable cutaneous affection. It has also been applied to other skin affections with marked benefit, to shield the eruptions from the action of the air and to modify inflammatory manifestations. It is also thought to be a very appropriate remedy in small-pox. applied to reduce the number of vesicles, especially in the face, and to exercise some influence over their size. How far its properties will be found to extend in this direction time and experience must tell. It constitutes one of the most convenient local applications within our reach for carbuneles and boils it has been my good fortune to try. I do not mean to imply by this remark that it will supersede the necessity for the knife in all cases, in the treatment of the former; not at all. But I do assert that it modifies very materially the burning pain so much complained of on the one hand, and limits the extent of the inflammatory action on the other; desiderata not to be overlooked in the management of this local, but nevertheless, very annoying affection. Boils can and have been treated with this pigment alone, in numerous instances, to the satisfaction of all interested: with less trouble and pain to the patient than by emollient cataplasms which have been the almost universal applications heretofore.

The action of white lead paint when locally applied appears to be two fold. In the first place it constitutes an efficient shield, and protects the delicate tissue involved in inflammation from the action of the air, which plays an important part as an irritant whenever the entaneous surface is at all involved; and secondly, as a sedative acting directly on the sentient nerve filaments, which are sure to become involved in the changes going on unless protected by some covering combining a sedative with its other properties.

The mode of applying it is very simple. A feather should be procured, and then dipped in the paint and gently drawn over the surface several times till it is completely covered with the pigment, which should extend a short distance beyond the margin of the inflamed surface, and in an hour or two a fresh coating should be applied and repeated until a covering of sufficient thickness shall have been attained; even then it should be applied occasionally, say once a day, as long as it is deemed necessary to protect the parts. In the course of a week after its application it peals off and leaves the surface beneath smooth, clean, and healthy.

There is one objection to the use of lead in any form which has been advanced by a few; it is supposed to be absorbed in sufficient quantity, in isolated cases, to produce lead colic or lead palsy. In reply to this objection, I must say that I have yet to see the first patient who has been thus affected from the use of paint locally applied.

ON THE TREATMENT OF EPISTAXIS.

BY T. C. MILLER M. D.

DR. E. T. FOUNTAIN, of Davenport, Iowa, relates a case of alarming hemorrhage at the nose, in which he succeeded in arresting the bleeding by the use of injection of the perchloride of iron into the nostrils. The use of iron injections in epistaxis is nothing new.

Prof. Karl Aug. Wilh. Berends, of Berlin, who died in 1826, in his Vorless. über prakt. Arzneiwissensch recommended in-

protions of a solution of sulphate of iron in nose-bleed. The late Prof. C. W. Hufeland in his *Enchind. Med.* also praised the same mode of treatment. Dr. Kochler, in his *Handbuch der specielen Thorapis* speaks of the *Tinotura ferri chlorate* as an injection in the same disease.

Not long since I was called in consultation to a case of very profuse epistaxis, where the attending physician, a very scientific gentleman, after trying various other remedial measures made use of undiluted perchloride of iron as an injection, and yet without avail. I proposed to him to give the liquor ferri sesquichlorate of the Prussian Pharmacopæa, five drops, in water, and the dose to be repeated each hour. In three hours the hemorrhage was completely arrested. The patient was already completely exhausted and very anæmic. This was a favorite remedy with Prof. Rademacher. The profession should remember, however, that what answers well in one case may not in another.

In some cases of epistaxis I have been successful in stopping bleeding by means of acids, digitalis, veratrum viride, oil of turpentine, quinia, muriate of manganese, nitrate of soda, iron, acetate of copper, ergot, ipecacuanha in small doses, morphia, etc. The application of cold water to the scrotum of males and to the mammary glands of females, is by no means to be neglected. I have frequently tried plugging of the nostrils as advised by Bellocq, but not with the hoped-for success.

Dr. Fountain states that his patient suffered a long time from the loss of blood. Why did he not give iron internally, or iron and manganese, as recommended in the *Journal of Rational* Medicine for March in the article Chlorosis?

INFLAMMATIONS OF THE MOUTH.—DISEASES OF CRYSTAL AND GLASS CUTTERS.

BY DR. PUTEGNAT, OF LUNEVILLE, FRANCE.

M. Putegnat calls the attention of physicians to a disease of the gnms peculiar to certain trades, and not yet described.

After glancing at the workshops in which the laborers of the Baccarat crystal manufacturers are employed,—after passing the condition of the workmen and workwomen of these crystal man-

ufactures in review, M. Putegnat makes the following monograph of an inflammation of the guras not yet known.

"A disgusting disease, not dangerous in itself, but which may have serious consequences as we shall prove, is so common in some of the crystal cutting establishments of Baccarat, that, without fear of exaggeration we can affirm, if not all the laborers in these work-shops show symptoms of it, 95 in 100 are attacked to a high degree.

"A man of the best constitution, the most robust, regardless of his temperament, the one who has a florid complexion, the one who under all other aspects enjoys perfect health; the one who commits no excesses, who is temperate, well fed, well lodged, in comfortable circumstances, the one who neither chews nor smokes; he I say, is no more protected from the disease of the gums, than a puny, anæmic, lymphatic, debauched, poor, badly fed, miserably lodged, workman, who makes an abuse of the use of tobacco-

"The one and the other are crystal cutters at Baccarat, that suffices that both should be affected by this inflammation of the

gums.

"At the end of three months sojourn in the cutting rooms they already show traces of this disease; at the expiration of six months, present its incontestable symptoms.

"In general this affection commences in, and is the most severe,

in the upper jaw.

"Of the cause of this predilection I am ignorant.

"The mucous membrane becomes reddened; its shades soon deepen into a blackish blue, the deeper in proportion as it approaches the dental borders. This color forms a species of arches which correspond to the alveolæ.

"It is not the same with that which is formed upon the gums of workmen in lead, and it is very difficult to give an idea of the difference which exists between those two morbid discolourations; the eyes can alone do it. Thus, whoever has seen the bluish bands upon the gums resulting from lead poisening will not confound it with the arches of a peculiar shade and of which the inner dental pillars have a deeper colour in proportion as they approximate their free borders,—that are presented by this species of inflammation of the gums. After what we have said it will

also be seen that this little band does not in any manner resemble that pearly one which according to M. Ranque and Négrier and Michael Lévy, is a certain sign of the occurrence of an ataxic state in pneumonia.

"The gums swell, especially towards these dental borders, which form a series of scolloped ridges. They rarely furnish tartar, and even then in small quantities; but an acid secretion which escaping from these free borders very speedly alters the enamel of the teeth. From thence it happens that the anterior or external part of the teeth, especially the incisors and the upper teeth, in the part which approximates the gums, shows itself at first, rough, then dotted with blackish points, and finally of a dingy black. This colour indicates the necrosis of the bony portion of the tooth as a consequence of the destruction of the enamel. Having reached this degree of alteration, the tooth is corroded at its neck, especially from without inwards, by caries, and finally it is broken off at a level of the alveola.

"Thus, among these laborers, the teeth, contrary to what takes place in scurvy and certain inflammations of the gums, in consequence of the retraction of the gums and of the alteration of the intra-alveolar mucous membrane, do not become deprived of their enamel, do not loosen, do not fall out, but are broken off at the level of the alveola. We can comprehend why these men at the end of several years sojourn in the cutting rooms, have, in place of teeth, only blackish and rounded stumps.

"After the crumbling of the teeth, what is easy to be understood, the gums continue to be diseased. Around the stumps they show a condition slightly softish and sanious, which renders the breath, not horribly mephitic as in the case of scorbutic, mercurial, and certain other ulcerations,—but nauseous, sometimes to such a degree that the atmosphere of the cutting rooms has a repulsive odor which almost produces nausea.

"This inflammation of the gums does not produce either heat, hemorrhage, or itching; and no pain either to the touch or during mastication. Thus it is, most of the workmen although suffering from it for several years disregard their affection."—Translated from L'Art Dentaire.

' BOOKS, PAMPHLETS, ETC.

A very large number of books designed to instruct the people in regard to themselves and their management in health and in sickness, have been published of late; not more, however, than the importance of the subjects treated of, and the general ignorance in regard to these matters have demanded. Among these is Dr. Hunt's *Patients' and Physicians' Aid*, published by C. M. Saxton, Baker & Co., of New York, and transmitted through the House of Rickey, Malory & Co., of this city.

This is not the best book that could be written on the subject, as the author does not seem to fully comprehend the professional matters on which he treats, nor the wants of those to whom he has addressed his work. But it contains many, very many, valuable ideas and hints. Its mistakes are somewhat glaring. Thus, "16 fluid gills make a pint;" "60 drops make a dram." Other similar errors need correction before another edition is put to press.

Dick & Fitzgerald of New York are publishing a series of books which they designate by the title of *The Reason Why*. The *Scientific Reason Why*, has been received from them. It is very good and will serve to induce the people to read more systematic works with interest and pleasure.

The Pioneers, Preachers, and People of the Mississippi Valley, is a well written work, published by Derby & Jackson of New York, containing a brief but succinct account of historical matters of great interest and importance; and those who cannot command the works or spare the time for a more thorough investigation of the history of the West, will find in this book a condensed account of intensely interesting events.

The Ninth Volume of the New American Cyclopedia, published by D. Appleton & Co., of New York, extending from "Hayne," to "Jersey City," is fully equal to its predecessors. It contains papers connected with the science of medicine from a large number of the best writers in the medical profession; among which are those on Heat, Heart, Herpetology, Horse, Hydrocephalus, Hydrophobia, Infant, Insanity, etc., etc. It also contains biographical notices of Drs. J. G. Holland, O. W. Holmes, S. G. Howe, C. T. Jackson, and James Jackson.

The American Association for the Advancement of Science has published the proceedings of its annual meeting at Springfield, Mass., last year, in which there is a labored defense of the American Coast Survey against the Pamphlet which Mr. Wells published sometime since, and which should have been answered by the persons most concerned, and not by this Association.

This volume compares favorably with its predecessors, and is of more interest to scientists than to practitioners of medicine.

The Prize Essay on Dental Anomalies and their influence upon the production of diseases of the maxillary bones, presented to the French Academy of Sciences at their meeting in March 1859 by A. M. Forget, M. D., has been translated for both the Dental Cosmos and the Am. Jour. of Dental Science, and recently issued in pamphlet from by the publishers of the Cosmos, Jones & White, of Philadelphia. It is a valuable monograph, illustrated by four beautiful lithographic plates, containing twenty figures or cuts delineative of the diseases described.

Mr. Charles B. Norton, the well known agent for libraries, in New York, proposes to publish a series of papers containing a collection of rare and original documents and relations concerning the discovery and conquest of America. These papers must be of much interest and of great value.

Prof. J. T. Hodgen, has sent his address delivered at the beginning of the Course of Lectures in the Missouri Medical College last November, on *The Influence of Surroundings*. It is a manly and philosophical paper, reflecting credit on both the author and the appreciative class who solicited its publication.

The Chemist and Druggist, published monthly, as a Trade Circular, in London, and sent to American subscribers from the New York Agency, 150 Broadway, at \$1.50 a year, appears to be almost invaluable to those engaged in the Drug business. It contains much of scientific interest and value, besides having a priced list of almost everything the trade deals in.

The American Journal of Pharmacy for May contains in addition to its usual variety of pharmaceutical and chemical intelligence a report of the meeting of the Philadelphia College of

Pharmacy, and its action in regard to the proposed revision of the U.S. Pharmacoposia, by the National Association. This periodical has sustained its advanced position for over thirty years.

I have received from the author Dr. John Ellis of New York, a very valuable popular work on the Avoidable Causes of Disease, and another on Marriage and its Violations. Unlike many books on medical topics, written for the people, this one presents important ideas in a clear, distinct, and forcible manner. The author has been quite free in his quotations, and unusually honorable in giving credit to those authors and books from whom he has derived his materials.

In a letter, which has been mislaid, Dr. Ellis mentioned that the book will hereafter be published by Mason Brothers, of New York.

TREATMENT OF NERVOUS HEADACHE BY HYDROCHLORATE OF AM-MONIA.—Hydrochlorate of ammonia has been lately recommended by some English physicians in certain cases of headache and obstinate neuralgia; and Dr. Barrallier, physician of the navy at Toulon, has made some observations confirming the beneficial effects of this salt in some of the painful affections of the head. He met with varying success, however, some of the cases seeming not to be amenable to the treatment. The conclusions he has drawn are:-1. That the mixture containing hydrochlorate of ammonia almost constantly dissipates the fits of idiopathic headache, and of that which is consecutive to an unusually abundant menstruation. 2. That it is powerless in relieving fits of hemicrania dependent on irregularity or suppression of menstruation. 3. That its use has been attended with pretty good results in cases of cranial pain dependent on functional derangements of the stomach, and also in accidental nervous headache. 4. That it has relieved headaches consecutive upon reiterated attacks of intermittent fever, such as are observed at the decline of several fevers, and in the course of the period of irritation of typhus. its action is not remarkable, except when it is given at the period when the pain is most intense.

HYDROPHTHALMIA.

BY F. CLARK, M. D.

As dropsy of the vitreous humor of the eye is an affection rarely met with in country practice, I propose to report a case of this character which has lately come under my notice, for the benefit of the many readers of your journal. The patient was a female, æt. about 50, and of rather weakly constitution, who had overtasked her eyes by the use of the needle. Complained that vision in the right eye had gradually become dim, with a slightly uneasy sensation, deeply seated, scarcely amounting to pain. There was an extensive effusion pressing upon the aqueous humor and iris, so as almost entirely to obscure vision of that eye. The vessels leading to the part was slightly injected and red, indicating, as I judged, a low grade of inflammatory action.

The treatment consisted in briskly moving the bowels, applying a blister near the outer angle of the orbit, and puncturing the same at its inferior margin. Under this treatment the effusion rapidly subsided, and in a few days the eye regained its normal condition.

Therapeutic Applications of Clay.—According to a short paper by Mr. Richard, of Soissons, inserted in the Revus da Thérapeutique Médico-Chirurgicale, clay would be an excellent topical application for the sting of insects, such as bees, wasps, musquitoes, etc. It is also remarkably successful in the case of wounds aggravated by inflammation of the skin, phlegmon, infiltration of the cellular tissue, and irritation of the lymphatics. Clay rapidly dispels the swelling consequent upon serious sprains; in short it is an antiphlogistic and discutient applicable to all external phlegmasiæ.

This substance should be used in the shape of a poultice; it is spread upon linen in a layer of four lines in depth, and is applied to the diseased part protected by muslin, and should be renewed whenever it becomes dry or heated.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

It is now nearly ascertained that the *Cathartin* which Winkler found in the fruit of the Rhamnus Catharticus is an impure

Chrysophanic acid.

Chrysophanic Acid, after being absorbed from the stomach, in part escapes through the kidneys giving to the urine the power of becoming quite red on the addition of an alkali. The same condition of the urine has been observed after the administration of the powdered root of the rhubarb. This acid, imperfectly prepared has been used under various appellations; but the pure acid has not yet been used in medicine.

ACID, CINCHONIC. Cinchonic, or Kinic, or Quinic Acid. An acid found in the cinchona barks, probably in combination with

the alkaloids and with lime.

ACID, CINNAMIC. Cinnamic, or Cinnamylic acid, is a constituent of the balsams of Tolu and Peru, of the yellow resin of Xanthorrhoea, and of the liquid Storax. Like Benzoic acid, when in the blood it becomes changed into Hippuric acid, and passes out through the kidneys. It has not yet been used as a medicine.

ACID, CINNAMONIC. An acid formed by the oxidation of the hydruret of cinnamyle. Similar, if not identical with cinnamic

acid.

ACID, CINNAMYLIC. A name sometimes given to Cinnamic

Acid, which see.

ACID, CITEIC. An acid found in many of the acid fruits, particularly in Lemons and other fruits of the genus *Oitrus*. Found in the fruits of Dulcamara, Dog-rose, Oranberry, Bird-Cherry, and Whorttleberry. In combination with Mallic Acid found in the Gooseberry, Strawberry, Red Currant, Raspberry, Cherry, and Tamarind.

Lemon Juice is one of the most agreeable Refrigerants. It is imported from the countries where lemons and limes grow readily, and is converted into Citric Acid by pouring it into large vats, and adding chalk or whiting until the acid is saturated and a citrate of lime is formed. After proper purification, dilute sulphuric acid is added, which unites with the lime forming sulphate of lime, and the citric acid in solution in water is set free. The solution is evaporated in leaden boilers and crystalized. The crystals are afterwards purified by being dissolved again, and recrystalized. In commerce, Tartaric Acid crystals are often mixed with those of Citric Acid with the intention to defraud.

A drink similar to lemonade may be made by dissolving the crystals of citric acid in water and sweetening the solution, and

the drink thus formed, or formed directly from the juice of the lemon, may be used indiscriminately in many cases. But the practitioner should bear in remembrance that *lemon juice* has dissolved in it a large per centage of potassa in the form of Cittate of Potassa.

As Tartaric Acid is less expensive than Citric Acid, the former is often substituted for the latter; and sometimes it is quite difficult to procure Citric Acid, or at least the pure acid unmixed with crystals of Tartaric Acid. The practitioner should cautiously examine each sample offered him to guard against imposition.

Citric acid, or lemon juice, combined with the bicarbonate of potassa to form an effervescing draught, is one of the best means known to relieve nausea of the stomach produced by acidity of, or from excessive excitation of that organ. The Citrate of Potassa thus formed is a mild diuretic and a refrigerant.

When the skin is quite dry and it is desirable to act specially upon it, the Carbonate of Ammonia should be used in place of the potassa. These draughts are excellent for the administration of those other medicines to which they are not incompatible.

Citric Acid or lemon juice may be given with common salt in various diseases of the alimentary canal where there is a tendency to putrefaction of any portion of the tube, or of its contents Hence in cancrum oris, putrid sore throat, in cardialgia, gastrodynia, diarrhœa, and dysentery, it has, in the hands of various practitioners, been found of great value. The same combination of lemon juice and salt has also been used in syphilis, and as a topical application in hospital gangrene, and all forms of gangrenous or putrefactive local diseases. For the purpose of making a similar impression and thus checking the putrefactive tendency, it has been used in remittent and intermittent fevers, as well as in typhus and other forms of putrid diseases.

As an Antiscorbutio, Citric Acid has been found useful; but for sea scurvy, the juice of the lemon has proved far more efficacious than the crystaline acid. Commodore Anson and others have justly given credit to Citric Acid and to lemon juice as having preserved their crews from this terrible scourge of all who had undertaken long sea voyages before the cause and treatment of scurvy had been carefully investigated. For its modus oper-

andi as an Antiscorbutic, see that Order.

As an Antiarthretic, and especially in acute rheumatism, it has established its character as superior to all other known remedial agents. Applied locally, it often gives immediate relief. Its peculiar mode of action as an Antiarthritic will be explained when treating of that Order of medicines.

An Artificial Lemon Juice is made by dissolving one ounce of

Citric Acid in one pint of distilled water, and adding a few drops of Essence of Lemon. This has none of the *peculiar* properties

of the natural juice.

Various kinds of Effervescing Citrates are prepared by combining Citric Acid with the various Alkalies. To form neutral compounds different proportions of the Acid are required to saturate the various alkalies. To form a neutral salt with commercial Citric Acid, there should be added:

To 20 grains of Acid, 29 grs. of Bicarbonate of Potassa.

" " Carbonate of Potassa.

" " " " Sesqui Carbonate of Ammonia.

" " Carbonate of Soda.

" " " " 24 " " Sesqui Carbonate of Soda.

To form an effervescing draught with Lemon Juice:

To 20 grains of Bicarbonate of Potassa, add t3iijss of lemon juice.
"Carbonate of Potassa, "f3iv" ""

" Sesqui Carb. of Ammon., "f3vj " "

These various forms of effervescing draughts are the most agreeable modes in which Citric Acid or Lemon Juice can be administered. But as is explained under the Order Antiarthritics, it is not advisable to add Alkalies, usually, to Lemon Juice, when given in Acute Rheumatism.

ACID, CLOVE. Clove Acid. The Heavy Oil of Cloves. Cary-

ophylic Acid. See Cloves.

Acm, Cocinic. Cocinie Acid. An acid formed from Cocinine, one of the fatty salts which occur in the fats used for making soap.

Acid, Coccotannic Acid. Kino, which see.

Acro, Coco-Stearic Acid. An acid found in

the oil of the cocoa-nut in combination with Glycerine.

Acid, Colophonic Acid. Formed by the action of heat on Pinic Acid; from which it may be distinguished by its greater affinity for salifiable bases, and by its being only slightly soluble in alcohol.

ACID, COFFEOTANNIC. Coffeotannic Acid. An acid in the fruit

of coffee.

ACID, COLUMBIC. Columbic acid. Obtained from the Columbo root by treating the alcoholic extract of Columbo with lime, and decomposing the lime salt with muriatic acid.

ACID, CONEIC. Coneic Acid. An acid discovered by Peschier

in Conium maculatum.

Acid, Copaivic. Copaivic Acid. The yellow brittle resin of Copaiva. It unites with the alkalies and some of the metals and forms Copaivates, as the copaivate of silver, of lead, of lime, potassa, soda, ammonia, and magnesia.

Acm, Crocic. Crocic Acid. The brilliant red acid of Saffron. Acm, Crotonic Crotonic Acid. Jatrophic Acid. Discovered by Pelletier and Caventeau. Obtained from Croton Oil, but has but little if any medicinal power.

Acid, Curcumic Acid. Sometimes called Curcumin. A yellow powder obtained from Curcuma longa, Tumeric,

and perhaps from other plants.

Acid, CYANOHYDRIC. Hydrocyanic Acid. Prussic Acid,

which see.

Acid, Delphinic. Delphinic Acid. Discovered by Hofschlagen in Delphinium Staphysagra, or Stavesacre seeds. It is white, crystalline, volatile. A small quantity has proved to be

powerfully emetic.

Acm, Digitalic Acid. Obtained by treating the watery extract of Digitalis with alcohol, and that extract with ether, and then with caustic baryta, by which the digitalate of baryta is formed and precipitated. That salt is then decomposed by sulphuric acid, and the Digitalic acid is set free.

ACID DIGITALEIC. Digitaleic Acid. Prepared by washing the precipitate of the watery extract of Digitalis with the acetate of lead, and decomposing the salt with carbonate of soda, and precipitating the filtrate with muriatic acid, and recrystalizing

from hot alcohol.

Acm, Ellagic Acid. Bezoardic Acid. Discovered by Braconnot in the Nutgall. It is a yellowish gray, insipid, powder, but slightly soluble in alcohol or cold water. Mr. Thomas Taylor has ascertained that the *Oriental Bezoar*, is an ellagic calculus. This acid is supposed to be identical with the substance that has been called Bezoarine and Bezoarstoff.

Acid, Emulsic. Emulsic Acid. Obtained from *Emulsine*, or the Albumen of Almonds, by boiling the Emulsine with Baryta.

Acid, Equiseric. Equisetic Acid. Malic Acid. Prepared either by the distillation of malic acid, or by heating Fumaric acid to 400° F. By fermentation this acid is converted into Succinnic Acid.

Acid, ERYTHRIC. Erythric Acid. The colorific principle of Angola and Madigascar Orchella, (Roccella fuciformis). Obtained by Stenhouse and Schunck, by macerating the lichen in the milk of lime, adding an excess of hydrocyanic acid to take the lime away from the Erythric Acid, filtering the solution, and allowing the acid to precipitate.

ACID, ESCULIO. Esculic Acid. An acid obtained from Saponine. Or rather the saponine is converted into Esculic Acid.

Acm, Ethero-Sulphuric Acid. Sulphovinic Acid. Formed by adding Oil of Vitriol to rectified spirit... Acro, Eugenic Acid. Clove Acid. Heavy Oil of Cloves. See Cloves.

ACID, EUXANTHIO. EUXANTHIO Acid. Obtained from Purres, a Chinese yellow dye-stuff composed of the Euxanthate of Magnesia.

Acro, Formic Acid. The hydrated oxide of Formyle, from which Chloroform and Iodoform are obtained as the radicle. Formic Acid dissolved in Alcohol is often used in Europe, as a Rubefacient, under the name of *Spiritus formicurum*; which is prepared by distilling four pounds of Alcohol from two pounds of Ants.

Acid, Fumaric Acid. Paramaleic Acid. Obtained from the juice of Fumaria officinalis by clarifying it, precipitating with the acetate of lead, decomposing the precipitate with sulphurated hydrogen, and recrystalizing the acid from hot water.

Acm, Gallic Acid. Usually prepared by long exposure of the infusion of nut galls to the air and frequently removing a scum which forms on the surface of the fluid so as to allow the atmosphere to act upon the extractive of the nut galls. A sedement of impure Gallic Acid falls to the bottom of the liquid, which is purified by being dissolved in boiling water, decolorized by means of animal charcoal, and then crystalized.

There seems to be some uncertainty in regard to peculiar changes which Tannic Acid has to undergo for the formation of Gallic Acid, but there cannot be any doubt that they differ materially in regard to both their chemical and their therapeutical

action.

Tannic Acid does not appear to be a simple substance, as when boiled with an alkali it yields a brown matter in addition to the Gallic Acid which is formed; and yet when Gallic Acid is given to a patient, Tannic Acid alone can usually be detected in the secretions, although, sometimes if Tannic Acid is administered Gallic Acid can be detected in the urine.

Pereira says that in the process of making Gallic Acid out of galls, the hydrated Tannic acid is changed by the absorption of oxygen, into Gallic Acid, and presents the following chemical

formula as explanatory of the process.

C18 H8 O12 + O8= 2(O7 H3 O4)+4 CO2 + 2 HO.

Hydrated
Tannic Acid.

Gallic Acid.

Carbonic Water.

Acid.

Headland is of the opinion that in the system at least, Gallic Acid is changed to Tannic acid, by the addition of some material that is contained in or formed in the blood, which being added to Gallic changes it into Tannic Acid. As Tannic Acid when a dded to a solution of Albumen, precipitates it, and Gallic Acid

does not, and as a solution of Gum when added to a solution of Gallic Acid enables the combined solution to cause a precipitation of Albumen, while neither alone will produce that result, he thinks that Tannic is formed out of Gallic Acid, in the system, by the addition of the elements of grape sugar, or of gum.

Headland's formulæ for the two Acids is as follows:

Tannic Acid=O¹⁶ H⁶ O¹⁰ +2 Aq. Gallic Acid=O⁷ H O³ +2 Aq.

Three equivalents of anhydrous Tannic, are the same as six equivalents of Gallic Acid and one equivalent of grape sugar.

Six equivalents of anhydrous Gallic Acid, are
Which added to one eq., Grape Sugar,

are equal to Three equivalents of Tannic Acid,

C⁴² H O²¹

C¹² H¹² O¹³

Hence the inference is, that Gallic Acid, when taken into the system, by becoming united with the elements of gum or grapesugar, becomes changed to Tannic Acid, and thus is produced its

peculiar therapeutic power.

As a therapeutic agent Gallic Acid is an Astringent; but unlike Tannic Acid does not precipitate either Albumen or Gelatine, and hence does not prove to be a topical Astringent of any value. (For the peculiar action of this Division of medicine, see Astringents.) But as it can be absorbed through the coats of the stomach to be carried in the blood to distant parts of the system, and while in the blood is changed in its combination and nature so that it acts like Tannic Acid and probably becomes Tannic Acid, it is proved to be the best simple pure astringent known to be used in cases where the astringent action is to be excited on some organ or structure at a distance from the stomach.

All observers have become convinced that as a topical application, this medicine is far inferior to Tannic Acid, and hence it has fallen into unmerrited disuse. But those who have administered it as a remote astringent have spoken highly of it. Dr. Todd says, that in all forms of hemorrhage, as hemoptisis, hematemesis, hematuria. or any other form depending on the hemorrhagic tendency, it is far the most valuable medicine, known to the profession. In night sweats, in profuse expectoration, in pyrosis, and in other forms of disease where an astringent must pass into the circulation to reach the part diseased, Gallic Acid is very much to be prefered to any other astringent known.

The dose may be from five to fifteen grains, to be repeated four or five times a day. It may be given in powder, or dissolved in water or syrup. For an explanation of the manner in which Gallic Acid acts as a therapeutic agent, see Astringents.

ACID, GALLOTANIC. Gallotannic Acid. Tannic Acid. Prepared by treating powdered gall-nuts with washed ether in a narrow

covered displacer, and treating the lighter stratum or layer of the liquid that passes through by distilling it, and then treating the dis-

tillate as in the preparation of Tannic Acid.

Acm, Gambodic. Gambodic Acid. Obtained by evaporating the etherial tincture of pure gamboge to dryness. It has been considered the active medicinal principle of gamboge. The dose is from a half a grain to a grain, repeated once in four or five hours. For its use, see *Gamboge*. It has seldom been used, and Gamboge seems of nearly equal value to it.

Acm, Gentisic. Sometimes miscalled Gentisin. Procured by Trommsdorff and others by washing the alcoholic extract of Gentian root with water, and treating the extract with alcohol. The tincture thus obtained is evaporated and the extract treated with

ether. The residue yields Gentisic Acid.

ACID, GLACIAL ACETIC. See Acetic Acid.

Acid, Glacial Phosphoric. See Phosphoric Acid.

Acm, Glycocholeic. Choleic Acid. Bilic Acid. The bitter principle of bile, usually in combination with soda, forming the Choleiate of Soda. Prepared by evaporating the water from fresh ox-gall, treating with absolute alcohol, adding a little ether, letting the mass stand several hours, decanting, treating the mass with more ether, and then treating it with boiling water to dissolve the Glycocholeic acid and leave the Paracholeic acid behind.

Acid, Gualacic. Gualacic Acid. Obtained by exhausting gualacum wood with warm alcohol, distilling off the larger portion of the alcohol, neutralizing with the carbonate of baryta, evaporating to a pasty mass, decomposing with sulphuric acid,

and purifying with ether.

Aom, Hæmatoxylic. Hæmatoxylic Acid. Sometimes called Hæmatoxylin, and Hæmatin. A red, bitterish, acrid, astringent substance, obtained by Cherrenl from Logwood. This acid has been somewhat used in medicine, but has not attracted the attention its great value deserves. It should be used as an astringent in chronic diarrhœa and in dysentery, as well as in hemorrhæge from the lungs, stomach, and uterus; also in leucorrhœa and other chronic catarrhs. Dr. Percival found it of value to check profuse perspiration. It should be used with caution until more is known of its action.

ACID, HEDERIC. Hederic Acid. A bitter principle found in

the seed of common ivy. Probably poisonous.

Acid, Hemidesmic. Hemidesmic Acid. Sometimes called Hemidesmin, and Smilasperic Acid. Obtained from the root of the Hemidesmus Indicus by Mr. Garden. As it has the smell and taste of the root it probably also has its medicinal proper-

ties. Hemidesmus has been supposed to possess therapeutical properties nearly identical with those which Sarsaparilla is supposed by some to have; and its root has been presented as a cheaper substitute for Sarsaparilla root. Dr. Ashburner says that Hemidesmus root increases the appetite, acts as a diuretic, improves the health,—causing plumpness, clearness, and strength, to succeed to emaciation, muddiness, and debility. This root has been used in secondary syphilis. In Tamool, the physicians make use of an infusion of it in strangury and gravel, either alone or with Carbonate of Soda dissolved in it.

ACID, HIPPURIC. Hippuric Acid. Now frequently prepared according to Gregory's method from the fresh urine of cows as well as of horses. Mix the fresh urine with milk of lime, boil.

strain, evaporate to 1/8, supersaturate with muriatic acid.

Acid, Hydriodic. Hydriodic Acid. Hydriod. Prepared by Dr. Buchanan by dissolving 330 grains of Iodide of Potassium in f3jss of distilled water, to which is added 264 grains of Tartaric Acid also dissolved in f3jss of distilled water. Settle, strain, and add water enough to make f3vj f3ij. Dr. Buchanan says that this solution acts therapeutically the same as Iodine. The dose is f3ss, three times a day.

ACID, HYDROCHLORIC. Hydrochloric Acid. Muriatic Acid. Chlorohydric Acid. This has been known, doubtless, for over a thousand years, first as brine acid, next as marine acid, and more recently as muriatic acid. In medicine it is used in two forms, the gaseous and liquid. It also enters into the formation of many salts. For a further elucidation of its character and therapeutic

properties see Hydrochloric Acid.

ACID, HYDROCYANIC. Hydrocyanic Acid. Prussic Acid. Bornssic Acid. Zootic Acid. A product of several vegetables. particularly those of the sub-orders of Almonds, and Apples, and Plumbs. Usually procured by the action of dilute sulphuric acid on the ferrocyanide of potassium. The U.S. Pharm. directs to take of Ferrocyanide of Potassium 3ij, Sulphuric Acid 3 iss. Distilled Water, a sufficient quantity. Mix the acid with four ounces of distilled water, and when cool pour the mixture into a glass retort. To this mixture add the Ferrocyanide of Potassium previously dissolved in f3x of distilled water. Pour f3viij of distilled water into a cooled receiver; and having attached this receiver to the retort by means of a sand-bath, with a moderate heat, distill six fluid ounces. Add to this five fluid ounces of distilled water, and enough to dilute the hydrocyanic acid so that 12.7 grains of Nitrate of Silver may be accurately saturated by 100 grains of the acid.

[To BE CONTINUED.]

MISCELLANY.

Podophyllum peltatum.—W. G. Parrish institued a series of experiments by which he determined the loss of weight by drying, of the root when gathered at different periods of the year, to be as follows:—

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7000 grs. Podophyllum collected June 25th, lost by drying 3923.5 grs.
7000 " " July 13th " " 4309 "
7004 " " Aug. 19th " " 5031.25 grs.
7000 " " Sept. 17th " " 5031 "
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From these experiments he also determined that

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7000 grs. podephyllum collected June 25th, contained 96 grs. Podephyllin.
7000 " " " July 13th, " 94 " "
7000 " " Aug. 19th, " 71 " "
7000 " " Sept. 17th, " 76 " "
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In these researches, Mr. Parrish obtained about one and one-third per cent. of podophyllin from the green root; and as the root lost about two-thirds of its weight by drying, the results did not differ widely from those of other experimenters. Mr. Proctor obtained a little over 4 per cent. of podophyllin from dried root that had been collected in the autumn, and Mr. Tilden from 5 to 5½ per cent. from the dried root that had been collected in April.

INFLUENCE OF QUININE AND MALARIA OVER PREGNANCY.—In the Nashville Journal of Medicine and Surgery, Dr. Davidson, of Arkansas, reports a case of threatened abortion, caused by malasia, and successfully treated with quinine. Dr. Davidson says: "Knowing the patient to have been the subject of intermittent feeer the summer and fall previous, it occurred to me that perhaps malaria was the cause of the uterine disorder. I therefore administered between fifteen and twenty grains of quinine the next day. She had no return of pains for about three weeks, at the end of which time they came on again. I stopped them with laudanum, but they returned daily, until I gave quinine." "I several times withheld the quinine for a day or two, when the pains would invariably return; but when it was administered regularly it never failed to keep them in check." The above case, so far as it goes, negatives the idea that quinine developes uterine contraction.

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TYPHUS AND ENTERIC FEVERS CONTRASTED. BY THE EDITOR.

Typhus and Enteric fevers, being both varieties of Continued fever, and both having some febrile symptoms in common, have for a long period of time, and by many eminent in the profession, been considered essentially identical; and, although the peculiar characteristics of each have been briefly portrayed, it is thought best to bring those peculiarities in more direct contrast as on a clear and prompt recognition of the variety will depend that distinctive treatment which is necessary for the preservation of the life of the patient, and his speedy and perfect restoration to health.

The comparison of these two varieties of continued fever, as proposed, appears to be the more necessary, as even those authors who have perceived the distinctive features of them do not place the importance upon these distinctions which is necessary for the rational and proper and successful treatment of these diseases; even the erudite Dr. Watson confounding or combining the special treatment proper in the one with that found most advantageous in the management of the other in such a way as to make his ideas, at times, somewhat indefinite and obscure.

TYPHUS FEVER.

Typhus originates at any season of the year, where many persons are crowded into confined and unventillated places; and is more common in cities and among dense population.

ENTERIO FEVER.

ENTERIO fever originates usually, in the latter part of summer and in early autumn, when vegetation, while still green, has been exposed to the combined influences of heat and water; and is more com-

Typeus Pryza-Continued.

In Typhus, the incipient stage lasts but two or three days, except when caused by infection, and even then but a few days at farthest.

The head at first is not affected, but wandering pains are felt in various parts of the body.

Epistaxis is never observed among the early symptoms of Typhus.

The bowels are usually singgish in Typhus, and diarrhoea is seldom or never observed in the earlier stages of the disease.

Low, muttering, and subdued delirium, may continue for days or weeks.

The fover is always ushered in with chivering, but without any chill.

Pain across the forehead is often very severe.

The pulse varies at from 100 to 120 beats in a minute, and is quite uniform for days together; after the first week is soft and weak.

The skin, during the first

ENTERIO FEVER—Continued.

mouly met with in small hamlets or rural districts.

Enteric fever is usually quite insidious in its attack, the premonitory symptoms often lasting a week or more.

The head is quite hable to be affected early, as though the patient had a very severe cold.

Epistaxis is a somewhat com. mon symptom of Enteric fever. In some epidemics it has been quits common.

Diarrhosa is quite common even before febrile symptoms are manifested; and almost always it becomes one of the most common symptoms, and very difficult to control.

"The delirium is active, often violent, but never continuous.

The fever is often ushered in with an active chill.

There is not usually any considerable pain in the head after the first days.

The condition of the pulse varies greatly from day to day, and even in different parts of the day, ranging from 80 to 150 or more beats in a minute.

The skin at times is quite

Trenos Fever Continued.

Week, is uniformily dry, hot, and pungent.

The tongue is usually dry, perhaps furred at first, and then brown, or quite black, with an accumulation of sordes.

The abdomen is seldom tender or affected in any way.

The patient lies quiet, on his back, nearly motionless, with his eyes open, and tends to slip down in bed.

The eruption appears as a mulberry rash, extending over the whole surface; comes out from the fifth to the eighth day, and after three days no more eruptions appear.

Putrid symptoms are observed in the breath and in the evacuations; and decomposition often produces death.

The fever lasts but two, or at most three weeks; and if the patient lives two weeks he will be likely to get well.

Typhus appears to effect

ENTERIO FEVER-Continued.

dry and hot, but often is moist with perspiration a part of each day.

The tongue is usually somewhat moist, and first white, then yellow, or brown.

The abdomen during the first week is very painful, and almost always tender and quite tympanitic.

The patient is restless, lies on his side or back, turns often, and complains of the bed if it is wrinkled or otherwise causes pain.

The eruption is delayed from ten to fourteen days, is in spots, of a bright rose color, slightly elevated, with a rounded head. The surface is not covered; usually there are but from five to thirty spots present at one time, but new eruptions continue to present themselves for one or two weeks.

Hemorrhage from the bowels with tenderness of the abdomen, is the gravest symptom.

The fever often lasts three or even four weeks; and then the recovery may be doubtful, and convalescence slow.

Enteric fever has its seat in the

Trems Favan—Continued.

mainly the blood and the head.

Alcoholic preparations, ale, wine, or brandy, are very valuable remedial agents.

Animal food may be taken with advantage during the entire course of the disease.

ENTERIC FEVER-Continued.

blood, and in the follicles of the small intestines.

Alcohol in any form, and even in small quantities proves hurtful.

Amylacious food, in small quantities, may be taken from the first; but animal food must be introduced cautiously and in the later stages of the disease.

Many other points of contrast between these two forms of fever could be given, but it is supposed these will suffice to enable any one to distinguish the variety met with, even if considerably changed and modified by the complications so common in different parts of the country; and will determine, readily, the proper course of treatment to be pursued.

RELAPSING FEVER.

There has been observed in countries where the poorer classes of the people are destitute of good homes and of sufficient clothing, and their poverty has rendered them liable to extreme destitution in cases of short crops and famine, or from war, or any cause which deprived them of the ordinary, although deficient diet,—a peculiar form of fever, quite commonly epidemic, but not readily infectious, that has, at times, become very widely spread and has attacked nearly all the people of the region of country where it prevailed who had been subject to the originating causes.

The more wealthy, better fed and clothed and housed people, even when an epidemic of Relapsing fever has been very prevalent and fearfully fatal, have not readily been infected by it, although cases where it has been propagated in that way are sufficiently well authenticated to prove that the disease is infectious, which has been doubted by some observers.

This fever, doubtless, has prevailed in many countries and during the entire time since the people have been led to suffer from the causes that produce it; and, although it has been described with more or less minuteness by writers for a century or more, still it is but recently that it has been recognized as a distinct disease and been named from its most distinctive characteristic,—a tendency to a *relapse*, or a repetition of all the symptoms that characterize a primary attack.

This is the form of fever spoken of by Dr. Rutty as prevailing in 1741, when there was observed a fever of six or seven days' duration, where the patients were subject to a relapse even three or four times, with a final recovery. About the commencement of the present century it was prevalent in the form of an epidemic in Ireland; and from the years 1816 to 1820 inclusive, it prevailed both in Ireland and in Scotland. It has quite often been observed in Ireland since that time; and in Scotland in the years 1843-44 it attracted a very large share of professional attention. In 1847 some people from Ireland introduced it into London, and it doubtless has obtained there, sporadically, ever since.

This fever usually commences with sudden rigors, pain of a peculiar character in the head, heat, dryness of skin, absence of appetite, nausea, perhaps vomiting, with the tongue white and covered with a milk-like paste or fur, pain in the limbs and joints, tenderness in the epigastrium, the functions of the bowels not much changed, but perhaps they are slightly constipated. Soon the skin becomes yellow or jaundiced, while the substance vomited from the stomach closely resembles the coffee-ground vomit of Yellow fever,—or it may be quite black.

This peculiar jaundiced state of the skin and coffee-ground or black vomit serves to distinguish the disease from Typhus and from Enteric fevers, as they are never present in those diseases. Thus, even in the earlier stages of the disease, there is presented a very prominent diagnostic symptom.

There are also observable minute petechial spots, or hemorrhagic points; not elevated, and not closely resembling the eruption of Enteric fever, and in no way similar to the mulberry rash of Typhus. In Typhus the pulse is quite uniform, ranging from 90 to 120 beats in a minute. In Enteric fever it is variable, and may rise as high as 140 beats in a minute in some portions of the day; while in Relapsing fever it will at times rise as high as 140 or

even 160 beats in a minute, and perhaps in two or three homes fall to 70 or 80 beats even in cases with no decided fatal tendency.

Relapsing fever usually terminates as early as the fifth, the seventh, or the ninth day after the attack. A very profuse perspiration then breaks out over the whole system, and the pulse that may have been very high sinks to or even below the standard of health. The patient appears to be recovering rapidly; but in about a week after this apparent convalescence has commenced, all the symptoms of the primary attack may again present themselves, to be followed with a fever like the first attack, and to continue about a week, when a profuse perspiration once more appears, and convalescence once more seems to be quite rapid.

A relapse or repetition of the fever does not always occur in every case; but frequently it does occur, and may be repeated three or even four times and the patient finally recover.

Although this form of fever presents some very grave symptoms and is very subject to a repetition or relapse, the number of cases that terminate fatally is usually small. In those cases that do terminate fatally it has been observed that the jaundiced hue of the skin is usually quite marked, the surface becomes cold, the satire force of the system seems to fail, and the patient becomes drowsy, unconscious, and dies without a rally. Cases that terminate fatally are those where the vital powers are so reduced that death occurs before the seventh day or the appearance of the critical perspiration.

It should be borne in mind that the febrile symptoms in Relapsing fever usually continue about a week; in Typhus about two weeks; and in Enteric fever about three or more weeks.

The Treatment to be adopted in Relapsing fever will have reference as much to the condition of the patient before the sebrile attack as during it. As the disease has been caused by the combined influences of destitution and circumstances that produce depression of the mental faculties, operating, perhaps for a long time;—in addition to such measures as are demanded to guard the system from the changes that produce the acute febrile symptoms, and which will readily suggest themselves to the mind of the practitioner, other means must be resorted to that shall

tend to repair the evils of long standing and which were the more direct producing causes of the fever.

Unfortunately it is atterly impossible in private practice to supply the wants produced by destitution and famine; and even if the patient finds admittance to a public eleemosynary institution the physician is not always able to command what is necessary for the well-being of those under his care. The sufferings of the system date back long prior to the breaking out of the fever, and it is required that not only the active febrile symptoms shall be subdued, but a relapse prevented, and the entire organism be placed in such a normal condition as the patient may not have enjoyed for months.

Early in the disease it may be desirable to apply warmth and stimulants to the skin; as warm muetard water, warm alcohol and water, warm salt and water;—and a sheet, wet with either cold or warm salt and water, folded and wrapped about the body from the arm-pits to the hips, will give great relief to the vomiting and other gastric derangements as well as prevent congestions in the abdominal viscera. A combination of:

R. Fluid Ext. of Valerian, Sweet Spts. of Nitre, Syrap of Ipecsc., 35 (3),

in doses of a teaspoonful, repeated once an hour, will tend to quiet the nervous and arterial activity, subdue the nauses, increase the discharge from the kidneys, act as a gentle diaphoretic, and prevent the derangement of the functions of the liver that is the cause of the jaundice.

The spleen as well as the liver becomes quickly involved, causing a deficiency of the red corpuscles of the blood as well as leading to a manifest enlargement and tenderness of the organ. To counteract the increase of this difficulty and the derangements produced thereby, an early use of the bitter Aromatics, salicine, sulphate or carbonate of manganese, or small quantities of iodide of potassium; and during the convalescence, phosphate of iron and quinia in addition to the preparations here named, must prove beneficial.

Malt liquor, wine whey, beef and mutton broth, and other dietetic measures, particularly those recommended to be resorted to in the treatment of Typhus and Enteric fevers, will hasten convalescence and tend to prevent a relapse.

Aromatics, tonics, chalybeates, and medicines to act on the lymphatics and glands, increasing their activity and power, as well as a cautious control of the diet and regimen, would ultimately restore most of such as are attacked with Relapsing fever. But unfortunately, nearly all who are subject to this disease are so situated that the proper management for ultimate complete recovery cannot be commanded, and the physician has to employ such substitutes as he can control.

When a relapse occurs it is to be managed on the same general principles that govern the treatment of the primary attack.

EXPERIMENTS WITH INHALATIONS OF CINCHONIC ETHER IN INTERMITTENT FEVER.

BY PROF. GROH, OF OLMUETZ.

[Translated from the German, by S. Nickles, M. D.]

When I had charge of the department for internal diseases in the military hospital of St. Ambragia of Mailand for a short time in the summer of 1853, a small quantity of the above named medicine was given me by Dr. Wurzian, staff-physician, for the purpose of ascertaining whether it possessed the febrifuge power for which it had been highly lauded by its discoverer, Mr. Manetti, and Prof. Pignacca.

The received preparation was a perfectly clear, colorless fluid, of an agreeable odor, which although much less volatile than sulphuric, ether still disappeared rapidly at the ordinary temperature of dwellings without any portion remaining; and upon being mixed with distilled water, emitted, as soon as contact took place, a dense, peculiarly penetrating, not however disagreeable vapor, after which the remaining fluid continued as clear as water, with a slightly acid reaction.

According to the information obtained, this fluid consisted of the cinchonate of lime as it is formed during the preparation of quinia, of sulphuric acid, and alcohol of a sp. g. of 1.184, in the proportion of two pounds of the two former to 44 ounces of alcohol. The sulphuric acid and alcohol were slowly mixed with each other so that they should not become heated above 190° F.; then the cinchonate of lime was placed in a capacious tubular retort of a capacity of more than double the quantity of the whole mixture, upon which the mixture of the two fluids was gradually poured, and by careful manipulation the lime permitted to become equally moistened, which was distilled by a slow fire in a sand bath until twenty ounces were contained in the receiver, after which this was re-distilled over chloride of lime to drive off the water.

Among a great number of sick with intermittent fever who were then under treatment, six of those cases were selected for the trial to whom no kind of medicine had been applied, and one who had been treated with comp. tinct. of cinch. without any permanent effect.

The quantity of the fluid designed for one inhalation, from one scruple to half a drachm, was poured upon a cloth folded to a funnel shape, and after this had covered the mouth and nose of the patient, it was inhaled by deep inspirations. The inhalation took place mostly at the beginning of the cold stage, but with some of the severer cases several doses were applied at short intervals before the expected paroxysm.

When the cinchonic ether was inhaled during the interval there was soon after the commencement of the inhalation, no other objective symptom present than a somewhat accelerated pulse and increased respiration; the patients inhaled with pleasure, and experienced no inclination to cough, nor any other disagreeable effect. One inhalation at the beginning of the cold stage soon produced a peculiar feeling of ease in the patient, so that there may not be a more pleasant febrifuge extant. With the exception of the patient mentioned in the sixth observation, all stated a diminution of the cold; and we saw the whole attack terminate considerably abridged, very much moderated, and sometime hardly observable; and finally, in those cases in whom there was considerable enlargement of the spleen, this enlargement diminish. In six of the cases observed in Mailand, a rapid and complete cure was effected, and even in the seventh the favorable influence of the medicine is undeniable, and the want of success to be attributed to the insufficient quantity of the preparation, and perhaps, to the diminished activity of the inhalation during the interval.

The effect of this medication was so surprizing that I will here present briefly the observations which were carefully noted at the time, especially as a preparation which had been accurately prepared according to the preceding direction by Carl Schroetter, apothecary of this place, produced equally favorable results in five cases treated by me in private practice and one in the hospital of this place during the past year.

1. Observation.—P. N. aged 23 years, a weakly, but otherwise healthy individual, was attacked after a elight sense of illness et 10 A. M. on the 15th of July 1853, and on the 15th at M. by Intermittant fever. Each attack continued four hours, and there remained considerable languor during the apyrexia for which he was placed in the hospital on the morning of the 17th. On the same day the paroxysm returned at 2 P. M. We observed a feeling of cold beginning in the back and rapidly extending over the whole body and increasing to a strong rigor; considerable pallor of the whole body, bluish finger nails, and bluish semicircles under the eyes, which were slightly sunken. The pulse had above 120 beats a minute, the spleen was considerably enlarged, and the patient complained of pain throughout the entire body, particularly cutting in the region of the spleen.

After the lapse of three-quarters of an hour the hot stage gradually commenced, with severe headache, difficult breathing, dry tongue, and considerable thirst. The subsequent perspiration continued about an hour; and there remained after the paroxysm which had continued about four hours considerable lassitude. During the first stages the patient was simply well covered, and in the following stages received only water to drink. On the 18th about 3 P. M. another rigor came on; half a drachm of the madicine, which had been kept in readiness was immediately inhaled. After a few inspirations, which had been performed with pleasure, a feeling of ease set in as the cold, in a very few minutes, had given place to a very slight degree of heat, which was followed by a very inconsiderable amount of perspiration, so that the whole attack which could hardly be observed, had terminated

in less than one hour. The patient remained under observation until the 20th of August, when he was discharged convalescent, having regained a blooming countenance.

- 2. Observation.—G. S. of powerful frame and in good health was brought into the hospital after having been attacked on the 14th and 16th of July at 10 A. M., with a very severe attack of intermittent fever which lasted four hours. His appearance was pale, countenance somewhat emaciated, and spleen sensibly enlarged. On the 18th of July, at the usual hour, a very severe rigor set in; a scruple of the ether was immediately inhaled, after which the single stages were manifested by but very slight symptoms, and the whole attack terminated in less than two hours. On the 20th, at 10 o'clock, a slight chill again began about the back, whereupon another scruple of the medicine was inhaled. The feeling of cold did not increase, and was followed in a few minutes by slight heat; after half an hour the patient felt entirely well, and the fewer has not since returned.
- 3. Observation.—Very similar was the case of J. F. after he had been severely attacked by paroxysms of more than four hours duration, on the 17th, 19th, and 21st of July, at 10. A. M., at M., and at 2 P. M. A scruple of the medicine was inhaled on the 23d at 4 P. M., as a very severe rigor was commencing, whereupon the chill disappeared rapidly, and the very mild paroxysm was of but one hour's duration. On the 25th at 4½ P. M., another alight chill came on, which however soon gave way to the inhalation of a scruple of ether, as but a mild degree of heat followed, and the patient felt entirely well after the attack which had continued scarcely half an hour. Although a slight sensation of cold appeared on the 27th and 29th at 4½ P. M. and he had been left only under observation, no trace of fever returned on the 31st, nor since, so that the patient was discharged well on the 20th of August.
- 4. OBSERVATION.—I applied the cinchonic ether for the fourth time in a case of severe quartan intermittent, in which the paroxysms always appeared at 10 A. M., and continued about seven hours. The patient G. M., aged 23 years, was at the time of his admission, July 21st, much debilitated, and of bad appearance. On account of which, I had him receive inhalations, each of one

scruple, on the 22nd, the day preceeding the expected paroxysm, and on the 23rd at 8, 8½, 9 A. M. a slight sensation of cold in the back, a very mild degree of heat, and some perspiration appeared, but not until about 12 M. This mild paroxysm terminated however in less than one hour. Since then the patient has remained without medicine, the fever has not returned, his appearance improved sensibly and in the same degree as his strength was reinstated; so that he could be discharged on the 20th of August, able to return to his duties.

5. Observation.—The next trial was made with J. R., and is of special interest as the effect of the medicine was realized while there was considerable tumefaction of the spleen, and decided cachexia. The only circumstances which could be ascertained from the patient were, that he had suffered since the 15th July from a tertian fever, which returned at very varying hours; and that, before its accession he had constantly enjoyed good health and looked well.

This strong built man was admitted on the 4th of August, on which day a paroxysm was expected. He was somewhat emaciated, of muddy complexion, and his spleen as could be established by palpation, and particularly by percussion, measured nine inches in length, and five inches in breadth. Three inhalations, each consisting of half a drachm of cinchonic ether, were administered on the same day between 8 and 10 A. M. Not only has no fever since appeared, but a diminution of the tumefaction of the spleen of a finger's breadth could be perceived on the same day at 4 P. M.; and since then a disappearance of the enlargement from day to day, so that it measured only 74 inches in length, and 44 inches in breadth on the 8th of August, and on the 16th of August could no more be felt below margin of the ribs. The patient was discharged on the 5th of Beptember, 1853, well nourished, of good color, and completely restored in strength.

6. OBSERVATION.—A tertian intermittant was observed in D. S. which manifested severe paroxysms, occurring at various times of the day, and continuing about nine hours. The patient had a cachectic appearance, his spleen bulging out beyond the margin of the ribs to the extent of a fingers breadth. On the 21st of July a little more than a scruple of the preparation was inhaled

at the beginning of the cold stage. The paroxysm was less severe in all its stages and of but five hours duration, the volume of the spleen remaining unaltered. On the 23rd of July the next fever day at 11 A. M. the patient inhaled an equal quantity of the medicine and fell asleep. He was awakened at 21 the same P. M. by a slight chill whereupon a third inhalation of equal strength was administered; the chill soon ceased, there followed but little heat with moderate acceleration of pulse without any perspiration. From the 24th to the 26th of July, inclusive, the fever did not appear, but returned on the 27th, and since daily, to the 3rd of August, constantly increasing in severity, the phenomena of the miasmatic cachexia at the same time becoming constantly more developed. No more of the preparation being at our command, inhalations of sulph. ether to the amount of one fluid drachm were tried which however only had the effect of increasing the severity of the heat and headache.

On the 3rd of August, I received a new supply of cinchonic ether, and had one scruple of the medicine inhaled on the 4th of August, at 8, at 10, and 12 o'clock. The fever, notwithstanding, returned at the usual hour with equal severity; but having just as many and as strong inhalations administered on the following day I had the pleasure of seeing the paroxysm shorter and surprizingly milder, and the volume of the spleen diminish. And since the fever has not returned, whilst his appearance improved greatly so that he could be discharged on the 5th of Sept. cured and able to perform duty.

7. Observation.—L. M. after the attacks of a severe intermittant had disappeared since the 1st of July, on using the comp. tr. of cinchona, was sent to the convalescent-house of S. Bernardino. On the 19th, of the same month, however, the fever returned and appeared on the two following days, always after 2 o'clock. The appearance of the patient grew sensibly worse and the volume of the spleen increased, the strength of the patient decreased, and his complexion became muddy. On the 3rd of August I received two more drachms of the preparation, of which I had one drachm inhaled in three doses on the morning of the 4th, and again on the 5th. The patient stated a considerable diminution of the attack on the first day, and on the last the attack was mild and

but short, and until the 14th of August no premonitory symptoms of a paroxysm appeared; the appearance of the patient grew better and the volumn of the spleen diminished somewhat, it could however still be felt distinctly below the margin of the ribs. On the 14th and 15th of August slight attacks appeared and as I was unable to obtain any cinchonic ether I took to the administration of the cinchonic tincture, under the prolonged use of which, M. also regained his health and was discharged on the 10th of September.

The results of the treatment of these cases of intermittant fever occurring in the year 1853 at Mailand, as well as of six treated with a preparation manufactured by Mr. Schroetter, apothecary, appears sufficiently favorable to me to give encouragement to further trials, especially as these inhalations would not be limited to intermittant fever alone. For this purpose, however, the proper dose and the most favorable time for application would then have to be established by further experience. Further on the chemical conditions of the preparation would have to be more accurately ascertained; also whether a distillation of equal strength could always be produced by the method of preparation given, and whether it would not be too expensive for general use.—(Oesterreichische Zeitschrift für practische Heilkends.)

NOTES AND COMMENTS.

BY T. C. MILLER, M. D.

GERANIUM, (Cranes bill,) cures a peculiar affection of the vascular system, which manifests itself in fever, and by hemorrhage, hyperæmia, stasis, and exsudation. I prefer to use it in the form of an infusion or the fluid extract.

HAMAMELIS VIRGINICA, (Witch hazel,) has properties very similar to those of Geranium, but we must bear in mind that different persons are differently affected by these agents.

HYPERIOUM PERFOLIATUM, (St. John's Wort,) also acts on the healthy economy very much as Geranium and Hamamelis do. It is very useful in controlling the vascular system in chronic distributions, in inflammation of the kidneys with uric acid sediment in

the utine, asthma, and cough. I have found it used alone of very great value in morbus Brightii. It removes not only the dropey but also the albumen of the urine.

MYRICA CERTERA, (Bayberry,) is also valuable in diseases of the vascular system. It cures chronic districts, slight hemorrhages, blenorrhosas, profuse sweatings, crythemes, superficial wounds, suppurations, and sore nipples.

CHIMAPHILA UMBELLATA, (Pipsisaway,) cures special affections of the kidneys, particularly morbus Brightii.

Corus Florida, (Dogwood,) cures a special affection of the spleen which manifests itself in intermittent fever.

Lectors Viscourous, (Bugle-weed,) is a remedy for special diseases of the heart and blood-vessels, both of the larger vessels and of the capillaries. The plant is useful to cure the peculiar condition of the organs of circulation as shown in palpitation of the heart, in cardialgia, asthma, vertigo, spasm of the glottis, hydropericarditis, cough, hæmoptysis, continued nausea, and rheumatism of the muscles of the extremities.

LEDUM PALUSTIO, is a remedy for a special affection of the muscles, and the serous and fibrous tissues which shows itself in the form of chronic rheumatism, eczema, nervous cough, pertussis. I have cured whooping cough with the tincture of ledum in doses of fifteen drops, repeated five times a day.

Trillium pendulum, (Birth-root,) is a remedy for diseases of the muscles where the disease originates in derangements of the muscular tissue. This disease shows itself:—1st. By hemorr. hages of a passive character. 2nd. By inflammations of the external skin, as in erythemes, sore places, as sore nipples of nursing women, chronic eczema, frost-bites. 3rd. By old inflammations of the mucous membrane, as in conjunctivitis, blenor-rhagia of the mucous membrane, as in conjunctivitis, blenor-rhagia of the mucous coat of the bronchies, profuse diarrheea, chronic diarrheea, perhaps combined with exaluria, or a urine slightly acid,—in chronic fluor albus, and gleet. 4th. In some forms of whooping cough. 5th. In chronic profuse sweating with anesomia.

VERATRUM VIRIDE, cures a special affection of the spinal marrow, (this is its primary physiological effect also,) which shows itself under the form of neuralgia, spasms, disturbance of the functions, of the mind, and chronic inflammation of the joints. In my hands it has cured disturbance of the mind with melancholy, spinal epilepsy and other spinal spasms, neuralgia of diverse parts of the nerves, palpitation of the heart, asthma, cardialgia, colic, chronic inflammation of the joints, ankylosis, chronic affections of the synovial membrane, and painful menstruation.

The effect of veratrum viride on the capillaries is only symptomatic of its action on the spine, and not a primary influence. I am well convinced that I am correct in regard to the physiological effect of veratrum viride. The primary action is always on the spinal marrow,—the effect on the capillaries is but secondary. Its curative power in cholera confirms this view. Not long since I cured a case of spinal epilepsy with it. The same had been previously accomplished by other physicians.

I have cured pneumonia as well with Cimicifuga as with veratrum. Both act primarily on the spinal marrow, but veratrum is the more powerful agent.

Phiromasia dollars. Long previous to the time Prof. Simpson wrote upon this subject, Dr. Carl Kissel advanced the idea that this disease is an affection of the blood, and that either the Acetic Tincture of Iron, or the Acetic Tincture of Copper are required for its cure; and that it will not be benefitted with either the roller, the elastic stocking, tonics, or purgatives.

Recently I have treated three severe cases of phlegmasia on the plan recommended by Dr. Kissel, and they recovered in from four to eight days.

Scurvy. I consider Muriatic acid, Iron, and Manganese, the three agents to be relied on in this disease.

IPECACUANHA IN MALARIOUS INTERMITTENTS. This is not a new remedy for this disease. Wichmann gave it in grain doses every three hours. The third one was given after the fever had been excepted. Gianella and Joseph Frank speak highly of this mode of treatment.

VERATRUM VIRIDE IN AGUTE METRORRHAGIA. In two cases

where there were also acute pain in the back, ten drops at a dose, repeated every hour and a half quickly arrested the disease.

VERATRUM VIRIDE AND GELSEMINUM IN ENTERIC FEVER. Equal portions of the fluid extracts in doses of eight drops of the mixture, repeated every three hours, quickly subdues the fever.

MURIATE OF AMMONIA IN GLEET. In a case of five years standing, and after the failure of many things, I made a trial of this salt as recommended by Schüttel, with entire success.

Ammonio-Children of Iron. (Martial Flowers.) I have used this preparation in diseases with a deficiency of moisture of the mucous membrane of the respiratory and the urinary organs and where the mucus of the digestive organs was tough and adherent; also in engorgements of the liver and spleen, producing dropsy or derangement of the menses, menorrhæa, menorrhæa, or chlorosis. In scrofulosis, obstinate intermittents, and disease of the pancreas I find it useful. Many formulæ are given for its administration.

GELSEMINUM IN TOOTHACHE. Saturate cotton with the tincture and fill the cavity of the tooth. Relief will often soon follow.

OTORBHEA. Drop into the ear a few drops of the mixture.

R. Glycerine, f3iij. Peruvian Balsam, f3j.

M

GELSEMINUM IN PRURIGO. I have succeeded in curing severa cases by using the tincture as a wash. In one case I dissolved borax in the wash. Sometimes I use compresses wet with the tincture.

GALLIC ACID IN TYMPANITIS, I have found of great value.

GLYCERINE AND GALLIC ACID IN SORE NIPPLES. I prefer a mixture of equal parts of these agents as of far more value than tannic acid in these cases.

SULPHUR IN DYSENTERY. Dr. Mayes of S. C., prescribed large doses of sulphur in dysentery. In Hufeland's Journal for 1798, Dr. Schmitjan reported similar treatment.

MERCURY IN DISEASES OF THE HEART. Dr. Stokes considers mercury almost as a specific in valvular disease of the heart ag-

sociated with hepatic congestion and dropsy, and advises to push its use to the verge of ptyalism if relief be not sooner obtained.

Dr. Flint regards it as a remedy of at least doubtful propriety if given so as to incur the risk of mercurialization.

Prof. R. Leubusher, in his recent Hand-book of Clinical Medicine says:—"Stokes treats acute carditis and pericarditis, by causing ptyalism as quickly as possible. In Germany we are fortunate enough to entirely ignore that mode of treatment. Our idea is not to cause a disease more difficult to remove than the original one."

Dr. Th. Willmack in his Hand-book of Rational Therapeuties says:—"I have never seen any favorable results produced by calomel."

Gendrin condemns the use of calomel. Taylor says his experience with it convinced him that it should be rejected.

DIPHTHERIA. I understand this disease to be a dangerous combination of exsudative inflammation of the throat, tonsils, vellum palati, and larynx. It is epidemic, sporadic, and malignant. In its treatment I use the nitrate of soda, the tincture of the chloride of iron, and the acetic tincture of copper; with a nourishing non-irritating diet. Nitrate of silver, alum, and chlorate of potassa have proved useless in this disease.

CHLORATE OF POTASSA, is unsurpassed in mercurial, aphthous, and ulcerative inflammations of the mouth.

BOOKS, PAMPHLETS, ETC.

Joseph H. Riley & Co., of Columbus, Ohio, have published in a somewhat abridged form, an English translation of Dr. Boismont's French work on Hallucinations, Apparitions, Sonambulism, Dreams, Etc. Although not equal in scientific value and professional interest to the complete work as published seven years since by Lindsay and Blakistone of Philadelphia, in its present form it may be as well adapted to the public taste and the public purse, and any one who will give it a careful perusal will find himself well paid for the trouble and attention he has devoted to the subject.

A work on Milch Cows and Dairy Farming, written by C. S. Flint, Secretary of the Mass. State Board of Agriculture, and published by Crosby, Nichols, Lee & Co., besides containing a vast variety of extremely valuable information in regard to the breeding and raising of stock has an appended article on Pleuro-Pneumonia, the disease that is exciting so much interest in Massachusetts at the present time, and was described in the April No. of the Journal,—and short articles on Black Tongue, and the Trembles.

It is an invaluable work to the dairyman and stock-breeder, and of interest to the profession.

Would it do any harm to indicate on the title page the number of the edition.

Dr. Backus of Selma, Ala., has sent his pamphlet, Pathological Phenomena Generalized, which has been read with no little interest for the purpose of discovering if possible any central or pivotal idea that should be of practicable value in the cure of disease. But, unfortunately, nothing of the kind has rewarded the research bestowed upon it. As a philosophical essay on the part of the writer, it may be well enough. But Cui Bono?

Dr. Edwin M. Snow, City Registrar for the City of Providence, R. I., has sent his Fifth Annual Report of the Births, Marriages, and Deaths of that city. It contains a mass of statistical information in regard to the subjects deeply interesting, and worthy the most careful consideration. Every City, County, and State should have such statistics reported annually.

Dr. Nathan Bozeman, the especial dread of Dr. Sims, has sent a pamphlet reprinted from the N.O. Med. and Surg. Journal, giving very interesting details of twelve cases that he has operated upon for *Urethro-Vaginal*, *Vescico-Vaginal* and *Recto-Vaginal Fistules*. These, together with his report of twenty cases published in the N. A. Medico-Chirurgical Review, present a very hopeful condition of the special branch of surgery to which the doctor deveted himself, and of his great care, tact, and skill, as an operator.

Dr. J. F. Bradford of Kentucky, read a long Report on Ovariotomy, before the State Medical Society in the spring of 1859, O'Connor state that the bromide of potassium does not produce any of the depressing effects of the iodide, which is a practical point of great importance.—Lancet.

TURPENTINE IN HÆMOPTYSIS.

There are several well-known remedies which justly enjoy a high reputation for arresting attacks of hæmoptysis, and amongst them may be mentioned acetate of lead, gallic acid, and dilute sulphuric acid. These we see commonly employed, and almost invariably with success. For some cause or other, however, they will sometimes fail, and our reliance must be placed upon some other astringent and styptic, which shall have the power of effectually checking this slow form of bleeding from the lungs. The oil of turpentine is, perhaps, one of the best next to those we have mentioned, and when properly administered can be relied upon. We lately observed two cases of hæmoptysis in the Charing-cross Hospital, under Dr. Wilshire's care, which continued obstinately persistent, in spite of the free use of acetate of lead firstly, then gallic acid, and thirdly dilute sulphuric acid. One patient was a young man aged twenty-one years who has had several recurring attacks of this symptom; he was admitted on the 28th of November. The hemorrhage was stopped only when the oil of turpentine was administered in doses of twenty-five drops three times a day in a little syrup and water.

The other person was a female, at first in the surgical wards under Mr. Hancock's care: she had had a breast amputated, which was followed by intense congestion of the lungs, with hemorrhage. She was now transferred to Dr. Willshire's care, and after taking the other remedies in full doses without effect, the turpentine controlled the bleeding, and she is gradually improving.

The efficacy of turpentine is well known in hemorrhages from the urinary passages, and also from the uterus—that is to say, in their passive form; and as it exerts a specific and peculiar influence upon mucous surfaces generally, we may look for good results in other parts of the body, of which the bronchi are most certainly not the least important.—Lancet

Another Sovereign Remedy for Ascardes.—Dr. Compensate has got a cure for ascarides which has never failed in his hands. It is a simple injection of water, containing five, ten, fifteen, to twenty drops of sulphuric ether, according to the age of the individual, and repeated more or less frequently, according to the number of the animals present. This agent, he says, has a double advantage. By its subtility it readily enters into and destroys the larva; and by its anti-spasmodic powers it allays the spasmodic and the nervous symptoms produced by the animals.

ABORTIVE TREATMENT OF PARONYCHIA.-Dr. Van Archen, in an article in the Medical Monthly, on Disease of the Tropics, If called to a case of whirtlow—which frequently occurs during convalescence from typhoid fever-while still in its beginning, I order two ounces of saleratus, or crude carbonate of soda, to be dissolved in about four ounces of boiling water; in this the finger should be held until the solution cools; which should then again be warmed, and kept applied for three or four, hours. In nearly all cases this abortive treatment is sufficient to effect a cure. In more advanced cases the whole finger should first be wetted and then rubbed with a solid piece of nitrate of silver until the skin becomes discolored; the finger must then be kept in an emolient poultice, until, at the end of thirty-six hours, the whole of the cuticle peels off and the cure is complete. But if suppuration takes place—which is marked by lancinating pain and throbbing—free incision is the remedy.

RIGID OS UTERI.—Lobelia in grain doses every hour will often relax an obstinately rigid os uteri in a much shorter time than it would naturally yield. Look out for all obliquities in cases where the os is a long time dilating, particularly in multipara.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

As the process of preparing Hydrocyanic Acid for the rapeutical purposes requires great care, it is seldom prepared except

in large manufacturing laboratories.

Hydrocyanic acid is used in medicine, but by no means to the very great extent its valuable therapeutic powers would warrant, but for the fact that it is so powerful and its sedative control over the nerves are so speedily manifested, that it is properly considered a very dangerous medicine. For a farther account of it, see Hydrocyanic Acid.

Acid, Hydroferrocyanic Acid. As its name imports, is a chemical combination of Hydrocyanic acid and

Iron. Not yet used in medicine.

Acm, Hydrooxalic. Hydrooxalic Acid. Oxalhydric Acid. Saccharic Acid. Produced by the action of Nitric Acid on Sugar. It has been used in combination with Lead, as the Saccharate of Lead, by Dr. S. E. Hoskins and others, who have used it hoping by its use to dissolve phosphatic concretions in the bladder; but without the favorable results hoped for. Hydrooxalic acid produces much the same impressions on such concretions as those produced by Malic Acid. Neutral Saccharate of Lead, as the salt is usually called, appears to be inert; but the acid saccharate of lead acts quite powerfully to dissolve stone, although its action on the living tissues is mild. For a farther elucidation of the action of this acid in combination with lead, see Plumbi Saccharas.

Acro, Hydrocyanic Acid. Dilute Hydrocyanic Acid. Dilute

Prussic Acid. See Hydrocyanic Acid.

ACID, HYDROSULPHURIC. Hydrosulphuric Acid. Hydrothionic Acid. Hydrothionicum. Hydrothion. Sulphuretted Hydrogen. The peculiar principle which has led the Sulphur Springs to be used in medicine. See Sulphuretted Hydrogen.

Acm, Hyocholeic Acid. Prepared from fresh

hog's gall. It has not been used in medicine.

ACID, HYPONITEOMECONIC. Hyponitromeconic Acid. Obtained

by acting on Meconine by means of Nitric Acid.

Acm, Hypophosphorous Acid. Probably this acid, uncombined, has never been used in medicine. It might be used on the hypothesis that there had become a deficiency of phosphorus in the system, and this should be given as a Restorative to supply that deficiency.

It can be prepared from several of the Hypophosphites, but perhaps the Hypophosphite of Baryta is preferable to the others. In preparing it from the Lime salt it may be well to take of Hypophosphite of Lime, one ounce, of crystalized oxalic acid, 350, grains, and of distilled water nine fluid ounces. Dissolve the

lime salt in six fluid ounces of the water, and the oxalic acid in three fluid ounces of the water; mix the fluids, pour the mixture on a filter paper, and to the filtered liquid add a little distilled water to make ten fluid ounces, which by evaporation may be reduced to half a pint. Each fluid drachm of this solution contains about six grains of Hypophosphorous Acid, or about two and a quarter gains of Phosphorus. The dose is safe at from ten to thirty drops. This preparation is eminently deserving a trial by the profession. See *Phosphorus*, and the *Hypophosphites*

Acm, Hypopicrotoxic. Hypopicrotoxic Acid. Prepared from the Anamarta cocculus, or Cocculus Indicus plant. In its chemical composition it closely resembles Picrotoxin or Picrotoxic

Acid obtained from the same plant.

Acid, Incoinic Acid. Obtained from the juice of the meat of animals. It has the taste of broth, and is an ingre-

dient in many of the cooked meat foods.

Acm, Iodic. Iodic Acid. Oxiodine. Obtained by boiling Iodine with Nitric Acid, or by the decomposition of the Iodate of Baryta by means of dilute Sulphuric Acid. It was introduced into use in the practice of medicine by Mr. Monks, who gave it, in combination with sulphate of quinia, in hoarseness consequent upon catarrh, in strumous cases, in incipient phthisis, syphilis, and other diseases. Its action on the system is similar to that of Iodine, (See *Iodine*,) but as it can be given in combination with sulphuric or nitric acid without being decomposed it is preferred to iodine in some forms of disease. The dose is from two to four grains three times a day.

ACID, IPBOACUANHIO. Cephaelic 'Acid. Obtained from the

root of the Ipecacuanha plant.

Acro, Jalapic Acid. The odorous principle of Jalap. (1)

Acro, Japonic. Japonic Acid. Obtained by digesting Cate-

chuic Acid, or Catichine, with caustic potassa.

Acid, Jatropic. Jatropic Acid. Crotonic Acid. Discovered by Pelletier and Caventon in the seed of the Croton tiglium or Purging Croton. At first this was supposed to be the active cathartic principle of Croton Oil, but Mr. Redwood thinks he has established the fact that Crotonic Acid and the Crotonates are nearly inert.

Ann, Kinic Acid. Quinic Acid. Cinchonic Acid. An acid that exists in cinchona barks in natural combination with lime. Prepared by exhausting the bark with cold water, precipitating the alkaloids and alkali with a little lime, precipitating the cinchotannic acid with a little more lime, filtering the remaining liquid, evaporating to form the kinate of lime, and decomposing:

the salt with oxalic acid, which forms the oxalate of lime and sets free the Kinic Acid.

Acid, Kinotannic Acid. The astringent principle

of Kino. (?)

Acm, Kinovic. Kinovic Acid. Chiocoeic Acid. Kinova Bitter. Prepared from the Quinquina bark of commerce, or false cinchona bark, as well as Calisaya bark, by boiling the bark with milk of lime, and decomposing the solution with muriatic acid. It does not appear to have any other medicinal property than that of a Tonic.

ACID, KOMENIC. Komenic Acid. Prepared by heating Meco-

nic Acid to 390° F.

ACID, KRAMERIC. Krameric Acid. The properties of this acid are but imperfectly known. It, together with Tannic acid, resides in Rhatany, and Peschier supposed that the Astringent property of Rhatany resides in the Krameric rather than in the Tannic acid.

Acid, Lacric. Lactic Acid. Acid of Milk. Namceric Acid. A sour syrupy fluid discovered in whey by Scheele, and introduced into the practice of medicine by Magendie. It was prepared by Scheele by evaporating milk-whey to one eighth of its bulk, saturating with slaked lime, filtering, adding three or four times its bulk of water, precipitating the lime with oxalic acid, filtering, evaporating to dryness, digesting the residuum in strong alcohol, filtering it, and then evaporating off the alcohol. It is also prepared from the juice of the Beet root, and from the Lactates, particularly Lactate of Lead and Lactate of Baryta. For a further consideration of this valuable medicine, see Lactic Acid.

ACID, LECANORIC. Lecanoric Acid. Found in Lecanora,

Variolaria, Roccella and other vegetables.

ACID, LICHENIC. Lichenic Acid. Famaric Acid. Discovered

in Iceland Moss, by Praff.

ACID, LICHESTEARIC. Lichestearic Acid. One of the acids of the Cetraria Icelandica, or Iceland Moss.

ACID, LIQUID ACETIC. See Acetic Acid.

ACID, LIZARIC. Lizaric Acid. Alizarine. The red coloring matter of the root of the Rubia tinctorium, or Dyer's Madder.

Acid, Lobelic Acid. Discovered in 1842 by Prof. Carson. It had been observed before, but was always confounded with Gallic Acid.

Acro, Lutrolic. Luteolic Acid. Luteolin. Obtained from the Reseda luteols, and from the French Weld.

ACID, MADDERIC. Madderic Acid. One of the colorless acids of Madder.

Acid Malic Acid. Prepared from the juice of sour apples, and of the fruit of the Rhus glabrum and Rhus typhinum,

and also the fruit of the Sorbusacupura and of the Rhubarb plant. From the juice of all the fruits named it may be obtained by precipitation with the sugar of lead, crystalizing, and decomposing the crystals with hydrosulphuric acid.

Malic Acid in an uncombined state has not been used in the practice of medicine. As found in Cider, especially the cider of Crab apples it is sometimes used. For its therapeutic properties

and use, see Malic Acid.

ACID, MARGARIC. Margaric Acid. One of the fatty acids of the fixed oils and fats. Combined with Glycerine it forms Margarine.

ACID, MARGANTIC. Margantic Acid. A fatty acid of Castor oil. Ricino-stearine, or Margaritine, on being saponified yield this acid.

Acid, Marine. Hydrochloric Acid. Muriatic Acid. Watery Hydrochloric Acid. The gaseous Hydrochloric acid dissolved:

in water.

Acro, Mastronic. Mastichic Acid. Soluble Acid Mastich Resin. Obtained from the resin Mastic. Its action on the system is similar to that of common Resin.

Acm, Mechloic Acid. Obtained from Meconine,

a proximate principle found in Opium.

ACID, MECONIC. Meconic Acid. Obtained from plants of the Poppy-tribe. A tribasic acid seldom or never used uncombined in medicine.

Acid, Mellitic Acid. The combination of Acetic Acid and Honey, commonly called *Oxymels*, is sometimes called Mellitic Acid.

Acid, Menispermic. Menispermic Acid. Supposed to have been found by Boullay in the kerels of the Anamirta cocculus, or Cocculus Indicus plant.

ACID, METAGALLIO. Metagallic Acid. The acid left after water has been driven off from Gallic Acid by heating it to 480° F.

Acid, Metaphosphoric Acid. One of the three modifications of Phosphoric Acid. See *Phosphoric Acid.*Acid, Methylsalicylic. Methylsalicylic Acid. Oil of Wintergreen. See *Wintergreen*, and *Gaultheria procumbens*.

ACID, MIMOTANNIC. Mimotannic Acid. Catechu. See Catechu. ACID, MORIC. Moric Acid. An astringent acid, of which little

is known.

Acm, Mortannic. Moritannic Acid. An astringent acid that probably owes its medicinal properties to the presence of Tannic acid in it.

ACID, HYDROCHLORIC. Hydrochloric Acid. Chlorohydric Acid. Muriatic Acid. Marine Acid. This acid was described over a thousand years since by Geber. See Hydrochloric Acid.

Acm, Myrrhic Acid(?) The hard resin of Myrrh. Acm, Myronic Acid. An inodorous, non-volatile, bitter acid, found by Bussy in the seed of the Sinapis nigra or common black mustard, in combination with potassa, forming the the Myronate of potassa.

Acm, Nicotianic. Nicotianic Acid. One of the acids of Tobacco. Malic acid obtains in that plant in much larger quantities than Nicotianic acid. This acid must not be confounded with the alkaloid Nicotina which is one of the most deadly poisons

known.

Acon, Nitric acid. The liquid or hydrated Nitric Acid has been known for over twelve hundred years. Geber described it under the name of Solvative Water. Recently there has been an attempt to have the name Azotic Acid used in scientific works in place of its more familiar and common name; but the idea has never obtained to any great extent. See Nitric Acid.

Acto, Nitro-Hydrochloric. Nitro-hydrochloric Acid. This liquid was described by Geber. It was formerly called Aqua Regia, or the King of Waters, because of its great solvent powers over the precious metals. Is is frequently named Nitromuriatic

Acid. See Nitro-hydrochloric Acid.

Acm, Nitro-Muriatic. Nitro-Hydrochloric Acid.

Acm, Nitrous. Nitrous Acid. This is an old name for a commercial mixture of Nitric, and Nitrous Acid, and Water, or the red fuming Nitric Acid. In strict chemical language the name Nitrous Acid is only applicable to a red colored gas formed whenever the binoxide of nitrogen escapes into the air. Those red fumes are the true Nitrous Acid.

Acm, Nrrecoo-Nrreco. Nitroso-nitric Acid. Fuming Nitric Acid. The Nitrous Acid of commerce. It may be prepared by heating a mixture of Nitrate of Potassa with half its weight of the oil of vitriol of commerce in a retort, and collecting the acid in a cooled receiver. In medicine it is used in the preparation of

Dr. Hope's Camphor Mixture.

Acid, Nordhausen. Nordhausen Sulphuric Acid. Fuming Sulphuric Acid. Saxony Acid. See Oil of Vitriol, and Sulphuric Acid.

ACID, ŒNANTHYLIO. Œnanthylic Acid. Formed by the oxydation of Œnanthal with the oxygen of the atmosphere on exposure.

Acm or Amber. Succinic Acid. Sal Succini. Obtained by the distillation of Amber. In medicine it is more usually prescribed in connection with ammonia, forming the Succinate of Ammonia, prepared by saturating the alkali with the acid.

This combination is given in the active nervous stages of typhus fever. In inveterate or long standing rheumatism, and par-

ticularly where the rheumatic poison has changed its location by metastasis. In nearly all forms of nervous affections, as apoplexy, spasm, paralysis;—in pneumonia notha; in gangrene, it has been highly lauded in Germany. Seibold gave it in cases of spasms of the uterus after delivery, causing a retention of the placenta. See Amber.

ACID OF LEMONS. See Citric Acid.

Acm Oleic Acid. One of the acids produced by the change of oils into soap by the addition of an alkali. The Oxide of Oleine.

Acid, Opianic Acid. An acid obtained by the exi-

dation of Narcotina.

Acm, Orsellic Orsellic Acid. Obtained by boiling Lecanoric acid with the milk of lime.

ACID, OXALHYDRIC. Oxalhydric Acid. Saccharic Acid. Hydro-oxalic Acid. Produced by acting on sugar with nitric acid.

Aoid, Oxalio. Oxalic Acid. An acid existing ready formed in many plants, particularly those belonging to the orders Polygonacese and Lichenacese. It was first discovered by Scheele. In combination with lime it exists in both vegetables and animals. The Oxalate of Lime makes up nearly the entire substance of the Mulberry Calculus. It may be formed artificially by the action of nitric acid on sugar. For a more full description of this acid and its use in medicine, see Oxalio Acid.

Acid, Oxygenated Muriatic. Chlorine. Discovered in 1774 by Scheele, who called it Dephlogisticated Muriatic Acid. In 1785 it was named by Berthollet, Oxygenated Muriatic Acid. Its present name was given it by Sir Humphry Davy on account of

its color. See Chlorins.

Acid, Palmitic. Palmitic Acid. Obtained from the exidation of Palmitine, a body residing in Palm Oil.

Acid, Paracholeic. Apparently but a modification of Choleic

Acid, one of the acids of the Bile.

Acid, Parallinic. A product obtained in 1833, by Batka, from the root of the sarsaparilla, and which he supposed was the active medicinal of the drug.

Acto, Parellic. An Acid found in various species of plants.

as the Lecanora Variolaria, Roccella, etc.

Acid, Pectic. Pectic Acid. A product of many of the succulent roots, and acidulous truits of plants. It may be obtained by adding alcohol to a decoction of oak bark, by rendering it alkaline with a fixed alkali, and adding acetic acid.

Acm, Pelargonic. Pelargonic Acid. An acid contained in the oil of rose geranium which is distilled from the leaves of the Pelargonum, and may be obtained by combining potassa with the

oil. It may also be obtained from the oil of Rue by adding nitric acid to the oil, and heating the mixture to throw off all the nitrous acid vapor, adding potassa, and then decomposing the

pelargonate of potassa by sulphuric acid.

Acm, Phioridzic. Phloridzic Acid. Phloridzin. This acid resides in the barks of several fruit trees, but is usually prepared from apple tree bark. Its preparation is very simple. Prepare a tincture of the bark with warm dilute alcohol, and allow the tincture to cool, when crystals will form. It is reputed to be an Antimiasmatic of equal value with Quinia. See *Phloridzic Acid*.

Acm, Phosphoric. Phosphoric Acid. This was first distinguished as a separate and distinct acid in 1740 by Marggraf. The Glacial or Monohydrated phosphoric acid is prepared from calcined bones (bone phosphate of lime.) Although the chemical formulæ of each variety are the same, chemists distinguish three varieties which they name meta-phosphoric acid, pyro-phosphoric acid, and common phosphoric acid. The first variety is capable of combining with one, the second with two, and the third with three atoms of water or base; and hence they are severally denominated monobasic, bibasic, and tribasic phosphoric acid. See Phosphoric Acid, and Phosphorus.

ACID, PHOSPHOR-MOLYBDIC. Phosphor-molybdic Acid. Prepared by precipitating molybdate of ammonia by phosphate of lime, washing the yellow precipitate with water, suspending it in water, dissolving it with carbonate of soda, and sending off the water and ammonia by heat. It was used in the detection of the alkaloids by Stas, and by many since he described his methods.

Acm, Picero. Picric Acid. Carbazotic Acid. Weltzer's Bitter. Usually prepared by adding boiling nitric acid to indigo. A cheaper and more modern method is to obtain it from coal tar. Dr. Moffat and others have supposed its action on the system to be identical with that of quinia. E. S. Wayne, of Cincinnati, has carefully tested its action on his own person and that of his friends, and thinks it more nearly resembles Salicine, and has found it of very great value in dyspepsia and debility of the stomach. He has not found it necessary to give more than a grain at a dose, repeated three times a day, before meals. Dr. Moffat gave it in cases of diarrhœa as a sequil to continued fever. He thought it both a *Tonic* and an *Astringent*. It is employed in France and perhaps in this country in place of hops in the manufacture of beer. It is intensely bitter, and as the bitterness resembles that of hops its use as a substitute cannot be readily detected.

Acm, Picrotoxic. Picrotoxic Acid. Picrotoxin. Obtained from the fruit of the Cocculus Indicus plant, after the fixed oil of the

fruit has been expressed. It appears to be the poisonous principle of the seed. It is intensely bitter, and a powerful *Inebriant*; and is that part of the seed which is of use in the adulteration of ale and beer. See *Anamirta Cocculus*.

ACID, PIMENTIC. Pimentic Acid. The Heavy Oil of Pimento.

See Pimento.

Acid, Pinic, Pinic Acid. Isomeric with Sylvic Acid. One

of the acids of Rosin and Turpentine, which see.

Acm, Polygalic. Polygalic Acid. Polygalin. Senegin. Prepared from the root of the Polygala senega, by first making an alcoholic extract, evaporating to the consistency of syrup, and treating the mass with ether to separate a fatty matter, then collecting the precipitate on a filter, dissolving it with alcohol, decolorizing it with animal charcoal, and again filtering, and evaporating to dryness. In appearance and in physiological action it bears a close resemblance to Resculic acid.

It has not been used as a medicine, but six and eight grains given at a dose to dogs have caused vomiting, embarrassed respiration, and death within two or three hours. Two grains thrown into the jugular vein of a dog caused vomiting and death

in two hours and a half.

Acid, Prussic. Prussic Acid. Hydrocyanic Acid. Borussic Acid. Zootic Acid. Obtained only from the organized Kingdom. It is rarely, if ever, found in animals, but Cyanogen, one of its constituents has been found in the urine, the perspiration, and the menstrual flow, and perhaps in the discharge from old ulcers.

See Hydrocyanic Acid.

Acid, Pyrogallic. Pyrogallic Acid. Prepared from the dry aqueous extract of galls, by dry distillation in small retorts, or in Mohr's Benzoic acid apparatus. It has not been used in medicine, but the photographers make considerable use of it in combination with silver because of its great sensitiveness to light. It is also used in making hair-dye to change light hair to brown or black.

ACID, PYROGUAIACIC. Pyroguaiacic Acid. One of the pro-

ducts of the destructive distillation of Guaiacum.

Acid, Pyroligneous. Pyroligneous Acid. An acid obtained from the destructive distillation of wood in iron cylinders in the preparation of Acetic Acid, and can be obtained also from wood tar by distillation. See *Pyroligneous Acid*.

ACID, PYROLIGNIC. Pyroligneous Acid, which see.

ACID, PYROMECONIC. Pyromeconic Acid. Obtained by the dry distillation of Meconic Acid.

[To BE CONTINUED.]

CHURCHILL'S HYPOPHOSPHITES IN PHTHISIS.

There years since Dr. J. F. Churchill read a communication to the French Academy of Medicine, laudatory of the Hypophosphites of Lime and Soda in consumption; and since then I have been anxiously looking for any positive and reliable practical results of this treatment.

Shortly after Dr. Churchill's paper was read the hypophosphites were tried in the Brompton Hospital for consumption, and failed to prove useful.

Again Dr. Churchill published his memoir with Additions; and again his remedies were tried at the Brompton Hospital; and Dr. Quain has published the results obtained, after giving them a full and fair trial. He said:

"A review of the preceeding facts led me to form a most un-favorable opinion of the value of the hypophosphites in the treatment of phthisis. I believe them to be comparatively, if not absolutely, useless. I have been induced to take some little pains in investigating the subject because of the unhesitating confidence with which their value is asserted and their use recommended in certain quarters; and I have also seen in the cases of some patients who have visited Paris how much time has been thrown away by substituting the use of these salts for remedies of undoubted efficacy in controlling the progress of phthisis.

M. Becquerel, who has had charge of a large number of patients with consumption, at La Pitie, Paris, has also made two series of experiments, the first upon twenty-five, and the second upon forty patients. He made use of the hypophosphites that he obtained directly from Dr. Churchill, and he, like Dr. Quain, observed no benefit to follow the treatment.

It is said that Dr. Churchill himself has been testing the value of his hypophosphites at Lariboisiere, and that he failed as signally as others have done.

RESIGNATION.—Dr. King has handed to the Daily papers of the city, a statement, which has led to the publication of the following:—John King, M. D., Professor of Obstetrics and Diseases of Women and Children, in the Eclectic Medical Institute of this city, has, we learn, resigned his chair in said institution.



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FEBRICULA.

BY THE EDITOR.

One of the most common kinds of continued fever to be met with in ordinary practice and when there is no febrile epidemic, is the one sometimes known as Simple Fever, but perhaps more properly denominated Febricula.

This may be caused by anything that tends to greatly and suddenly depress the vital forces, and is quite common as an accompaniment of various forms of medical and surgical diseases. When not caused by any pre-existing derangement of the system, it may be produced by exposure, by fatigue, by prolonged fasting, or by surfeit. It does not owe its origin to any specific poison introduced into the blood, but rather to anything that so depresses the vital forces that chemical changes for the time preponderate over the controlling influence of vitality; and as no specific poison is generated by the fever, it is not capable of being propagated by infection or contagion.

This disease manifests itself suddenly and without premonitory symptoms. The symptoms manifesting an attack of Febricula, are those usually understood to be included in the term febrile. Usually the first symptom is a stage of chilliness, quite marked, and sometimes prolonged for an hour or more. This is followed by a great increase of heat, a frequent pulse, high colored or red urine, perhaps some anxiety of mind. The first stage usually passing away with profuse perspiration. The entire system seems overcome with lassitude, or a disinclination for physical or mental exertion; there is a loss of appetite, perhaps some nausea, and certainly a loathing of food, headache, pain in the back and limbs, and impressibility of the surface. The tongue soon becomes dry and fevered, thirst appears and may become quite urgent,

there is tenderness in the epigastrium, the bowels become sluggish, or are constipated, the body emaciates rapidly, the face is pale with a haggard look; there is an almost constant exascebation towards night, with a remission towards morning, with a tendency to sleep from three or four o'clock till seven or eight, when the pulse is more quiet and soft, and the skin more cool and moist than at other times during the day.

These symptoms may continue but for two or three days; but more frequently on the fourth, sometimes as late as the fifth or sixth, the tongue becomes moist, the skin looses its harshness, the pain in the head and limbs abate, a profuse perspiration follows, and the *fever* terminates,—leaving the patient exhausted, languid, with a somewhat feeble pulse, and with a tardy general convalescence.

This form of fever has been described under various names, the distinctive appelation having reference to the particular portion of the system, or the organ supposed to be most seriously involved. Hence its various forms have been known as *Brain* fever, *Catarrhal* fever, *Gastric* fever, *Billious* fever, *Mesenteric* fever, and perhaps by many others.

Treatment.—When the pulse is too active, arterial sedatives, as veratrum viride and gelseminum will be useful. The surface may be bathed with tepid vinegar and water, with pure water, or with water rendered slightly alkaline, as required. Acidulated drinks, or such drinks rendered effervescent by the addition of the carbonates of ammonia or of soda, will be found very grateful, and to allay the thirst when present. Mustard, or tincture of camphor, applied to the epigastrium, will relieve the nausea, and tend to relieve the irritation and tenderness in the stomach. Mild laxatives or enemata may be needed to overcome the constipation of the bowels. Mustard to the feet and ankles will draw the blood to those extremities, and lessen the congestion and pain Diaphoretics, diuretics, nervines, and opiates may be required. And such general means must be adopted, as will enable the system to pass through the febrile attack with the least possible suffering.

The Diet during the prevalence of the fever should consist of a little gruel, a cup of tea with a cracker, a slice of toast, or

of a very small quantity of amylaceous food. These little meals, if meals they may be called, should be repeated as often as the patient desires them, but never exceed a very small quantity at any one time.

During convalescence, a little pure sour wine, with a gradually increased quantity of animal food may be allowed,—with a constant watchfulness that the digestive organs perform their functions unembarassed, and that neither the physical nor the mental faculties of the patient are taxed beyond their powers, until he has fully recovered his flesh and strength.

After the fever has been absent about a week, the patient is subject to a relapse, indicating in that as well as in other regards, a resemblance in Febricula to Relapsing fever; and when a relapse occurs, it is to be managed in a manner quite similar to that required in the primary attack.

For the management of this, as well as other forms of continued tevers, the physician should strive to moderate any undue arterial and nervous excitement;—to support and sustain the vital forces of the system;—to obviate any tendency to local congestions or local inflammations;—to allay pain and distress;—to prevent, if posssible, the embarassment of any organ in the performance of its functions; and to ensure a safe, speedy, and perfect convalescence.

PLAGUE.

BY THE EDITOR.

This disease has been known in Asia and other Eastern countries a long time, where it has been known as the *Pestis*, the *Oriental Pest*, the *Typhus of the East*, and by other names supposed to be more or less indicative of its pathology. It has probably never visited the west of Europe nor America in modern times; although an hundred and more years since it appeared in the south of Europe, and was very fatal. Some four or five hundred years since, under the name of the *Black Death*, it ravaged Europe, when it is supposed it destroyed not less than twenty-five millions of persons.

In regard to the producing Cause of this disease, modern physi-

cians do not appear to have entertained any very decided or confident opinion. As the Cholera has been supposed to originate in the delta of the Ganges, so the Plague has been supposed to originate in the delta of the Nile, from which country it was propagated by contagion to Syria, Constantinople, Asia Minor, and other countries, both by the ordinary causes that aid to spread an epidemic as well as by contagion. But while the epidemic character of its visitations in countries ravaged by it has been admitted, its power of becoming propagated by contagion or infection has been doubted by many and denied by some quite eminent in the profession, who maintain that the annoying quarantine regulations of the cities on the Meditereanean Sea, are as completely inoperative as they are vexatious.

The Symptoms of this fever do not, in the earlier stages, appear to be peculiarly distinctive. The first positive symptoms are, an unusual feeling of languor, lassitude, depression, and anxiety; with an uneasiness, rather than pain, in the head, and a feeling of depression and distress about the heart. There is also more of a feeling of restlessness than usually accompanies the attacks of other diseases.

The debility is so great, almost at first, that there is staggering in the gait, and quite soon an inability to stand or sit upright. The stomach is soon affected with nausea and vomiting, and a feeling of faintness, but rarely of syncope. The countenance becomes more haggard, and there is twitching of the muscles of the face. The skin becomes hot, dry, and harsh. The pain in the præcordial region increases, and soon there is vomiting of bilious matter. The tongue, at this stage of the disease, becomes so much swollen that the swelling is esteemed almost a sure diagnostic symptom of the plague. It is covered with a white pasty coating, which is pearly along the centre while the tip and edges are nearly or quite clean and moist. The pulse beats from 100 to 130 in a minute, is small and contracted. The respiration is somewhat imperfect and laborious; the voice indistinct, thick, and tremulous.

Shooting pains are soon felt in the regions where there are an abundance of lymphatic vessels and glands, particularly in the groins and axillæ. The lymphatic glands begin to swell and

are tender on pressure. They ultimately swell very much and suppurate, causing buboes and carbuncles—buboes from the disease of the solitary conglobate lymphatic glands, and carbuncles from the disease affecting the more superficial glands, and the surrounding tissues.

As was remarked, the swelling and peculiar appearance of the tongue has been recognized as the pathognomic symptom of the disease; but the disease of the lymphatic glands are the sure indication that the disease is the plague. In the less grave cases the gland swellings are red; but in those more grave and unfavorable, they become livid, purple, and gangrenous.

The bowels are torpid, and not easily acted upon by medicine; and the urine is scanty, high-colored, and sometimes entirely suppressed.

After about twelve or fifteen hours from the invasion of the disease, the nerves become very much affected. Restlessness, stupor, coma, or active delirium may be present. The tongue is quite tremulous on protrusion, the countenance looks confused, the eyes look peculiarly lustrous, and the pupils are greatly dilated. The tongue becomes greatly swollen and yellowish, perhaps dry and parched, with a red streak on the centre in place of the former pearly one. It never becomes black, as in Typhus fever, and other forms of disease where the fluid within the veins undergoes putrefacation. The teeth become covered with a kind of a black or dark sordes that in appearance bear a close resemblance to soot, and when dry falls into powder.

There is great pain in the stomach, with occasional vomiting of a dark fluid, and at times an incessant nausea that appears uncontrollable. There is also a tendency during the latter part of the first week for blood to exsude from the different mucous surfaces. Especially is menorrhagia common, and abortion is almost certain to follow when pregnant women are attacked with the plague.

When convalescence commences, the skin becomes moist, the pulse falls to the natural standard, the countenance becomes more natural, the eyes are less lustrous and the pupils contract, the buboes suppurate, the carbuncles flatten, and there are other and general indications of a restoration to health.

When the disease tends to a fatal termination, the skin becomes more harsh, the face and hands may be covered with a cold clammy perspiration, the pulse becomes small, nearly imperceptible and fluttering, there is low muttering delirium, the breathing is hurried and difficult, the countenance assumes a more ghastly expression, the buboes and carbuncles appear undeveloped, and death usually follows violent convulsions.

The Treatment is indicated by the nature of the disease as revealed by the various symptoms it produces. Anti-putrefactives, and especially those that act upon the lymphatic glands and vessels and their contents, and upon the nerves, are strongly indicated. Hence, Chlorine, as Labarraques chlorinated solution of sods, a solution of chloride of lime, or a solution of hydrochlorate of ammonia, in small quantities, frequently repeated, must prove beneficial. So also will a solution of common table salt, quite diluted, be decidedly useful. Tincture of gelseminum, in moderate quantities, to quiet the action of the heart and arteries and the nerves that control their action, will be likely to be beneficial. Experience has already proved gelseminum to be useful in yellow fever, which has some features quite analogous to the plague. The tincture of arnica and of conium are also indicated. The nervous excitation may need to be quieted by the proper treatment, but nothing that takes away the smallest amount of the vital forces can be allowed. Neither blood-letting, active emetics nor cathartics have ever proved serviceable. Mercury in all its forms has always proved harmful, when given in this disease, at any stage.

Quinia, along with tonics, and particularly scutellaria laterifolia in which the tonic is combined with a nervine, and aromatics will be demanded, especially after the first stage of the disease is passed, and convalescence is progressing. Aromatic sulphuric acid, or perhaps better, dilute phosphoric acid in doses of from ten to thirty drops, diluted with plenty of water, should be given in conjunction with other treatment, two or three times a day until the health is fully restored.

During the whole course of the disease and during the convalescence, the bowels should be kept open by means of injections of salt and water.

The buboes and carbuncles should be dressed with plegets of cloth, wet with salt and water in which one fourth as much tincture of conium is added as there is of water, until suppuration has commenced; when a warm infusion of hops or scutellaria herb may take the place of the salt-and-water and tincture of conium. They should be allowed to cleanse themselves thoroughly before any attempt is made to heal them up. An infusion or tincture of chamomile flowers will be beneficial, as a wash, to prevent excessive suppuration.

The diet and general management recommended for Typhus fever will be applicable to plague, with such modifications as peculiar circumstances may indicate.

DYSENTERY.

BY PROF. C. H. CLEAVELAND.

PERHAPS there is no form of disease more frequently met (with the exception of ague and fever,) in the South and West, than Dysentery; and it is also quite frequent in the summer and autumn in other parts of the country.

The annual appearance of the disease, and its painful and dangerous character, have led medical men to give a large share of attention to its study and investigation, and to the publication of frequent articles in regard to its pathology and treatment; so that there are already before the profession a multitude of ideas, both as to the nature and cause of the disease, and the modes of treatment pursued by different practitioners.

But, without any desire to either agree or disagree with others in the profession, I will express my own views of the nature of this disease, and the proper modes in which it should be treated.

Symptoms.—As the word Dysentery may not be understood by all in the same sense as used by me, I prefer to give a definition, and in the following words:—Dysentery is a disease manifested by a peculiar and severe pain, mainly confined to the rectum and colon, recurring in paroxysms of tormina, and each paroxysm is usually followed almost immediately by discharges from the bowels, of vitiated, jelly-like mucus, or muco-sanguin-

ious, or muco-purulent matter, small in quantity, but accompanied with severe straining at dejection, and with a sense of soreness and swelling and pressure in the rectum.

The discharges may present a variety of appearances, owing either to the stage of the disease, the extent to which it has progressed, or the treatment that has been adopted. Some do not apply the term dusentery to a disease unless there is a discharge of blood. But it is evident that if the mucous membrane and the walls of the rectum are inflamed, an increased discharge of mucus may follow; and the presence or absence of blood must be owing to the condition of the congested blood-vessels, and is not an essential feature of dysentery. At times the larger and distended blood-vessels are ruptured, and profuse hemorrhage ensues; so that the dejections are composed almost entirely of blood, either fresh, if recently poured out of the vessels, or clotted. or even partially decomposed and putrid if it has been retained in the rectum a sufficient length of time to admit of these changes. In the later stages of the disease, if protracted, the discharges have frequently a granulous appearance, or as curd or lymph floating in a thin serous fluid, in which fluid may also be observed blood or pus.

On examination, the mucous membrane of the rectum is found red, inflamed, congested, very tender and painful to the touch, and after a little time, denuded of its epithelium, and perhaps ulcerated. *Post mortem* examinations show that the inflammation is not confined to the rectum, although it probably commences there; but extends to, and in some cases involves, a considerable portion of the colon.

Along with the inflammation and tenderness and tormina, with frequent but small dejections from the lower portions of the alimentary canal, there is often a dry, inactive, or constipated condition of the small intestines which leads to an almost entire suspension of the fecal discharges, or the fœces are voided in small hard masses, the passage being accompanied with unusual effort and pain.

Although a constipated condition of the upper portion of the intestines is usual in dysentery, it is not an essential accompaniment of the disease; for at times, the evacuations may recur as

usual once or twice a day, and only modified in appearance or quantity as it may be supposed they would be under the influence of the medicine and food of sickness, and not by the peculiar diseased condition of the large intestines. The constipation of the upper portion of the alimentary canal, when present, demands special attention in the treatment of dysentery.

The Fever present in this disease, varies in character with the variation in cause, and the duration, intensity, and extent of the local inflammation. When the dysenteric symptoms are produced by the inhalation or absorption of emanations from human excrements, as is often the case, the changes in the blood may precede the local diseased manifestation, and present the peculiar form and aggravated character observed in fever produced from the same or a similar cause and when the local difficulty is not manifest.

When febrile excitement or fever is caused by a specific poison acting in the blood that gives rise to a peculiar set of symptomatic symptoms, while the same form of poison sometimes also gives rise to dysentery in addition to the peculiar fever, and the dysenteric form of the disease becomes quite prominent and important, it is proper to give the same distinctive name to the variety of dysentery which also belongs to that variety of fever.

When an epidemic of dysentery occurs in camps, cities, or in a close collection of huts bordering upon a public work; or in a newly settled country, where proper care is not taken to cover up or convey to a distance the fœces and other human exerements, and the waste of animal and vegetable food,—it will often be observed that the impurities which fill the air and enter the system by inspiration, or by the water drank, will produce dysentery in many, while others will have a febrile form of disease resembling the fever of the dysenteric patients, and yet not have any dysenteric discharges from the bowels. This fever is called Typhus, and in some instances is very severe and fatal; and it is proper to call the fever in dysentery which has an identity of cause and of manifestation by the same name; hence such cases of dysentery are called Typhus Dysentery.

But the disease occurs nearly annually in localities where the heat of summer produces relaxation and debility of the digestive

organs, and there is also decayed vegetable matter acted upon by heat and moisture; or in regions where miasms are generated, and miasmatic diseases abound. As miasm, if not too powerful, produces ague and fever, or intermittent and remittent fevers as well as dysentery, it is very common to observe a similar periodicity or intermittent character manifested in the fever which accompanies the dysentery to that which obtains in those cases where the alimentary canal is not specially involved; hence this form of the disease is often called *Periodio Dysentery*.

When dysentery is caused, as has been shown, by emanations from human excretions, or by misasmatic exhalations, it is called Typhus, or Periodic; and when caused by famine, or destitution, or starvation, it may be called Relapsing Dysentery. resulting from organic matter in a peculiar state of decomposition such as produces Enteric Fever, it might properly be called Enteric Dusentery. In these cases the fever accompanying the dysentery would closely resemble the fever produced from the same causes when dysentery does not present itself as a compli-It may be doubted however, if the term Enteric, or Tvphoid, as applied to dysentery, is ever proper. Theoretically it might possibly be anticipated that those causes which produce Enteric fever will produce dysentery. Yet of all the cases of this fever as reported by Louis, Flint, Bartlett, and others, dysentery has not been present in a single one; and if never present in this fever, the inference may be drawn that Enteric symptoms are never or seldom manifested in dysentery, and experience and observation demonstrate such to be the fact. The febrile manifestations are often valuable as a guide to special modes of treatment.

The peculiar cause of dysentery, of whatever variety, appears to have first a lodgement in the blood, and to produce changes in that fluid, with a tendency to decomposition, which give rise to the febrile symptons. After the local intestinal disease has progressed in extent or duration, it doubtless supplies, by means of the secretions formed and again absorbed, and by the direct action of the inflamed solids upon the fluids flowing through them, additional materials, which act upon the blood to produce changes in it. In this disease, therefore, as well as in small-pox

and other disorders where the solids and semi-solids are inflamed and in part reduced to fluids, there is manifested a *primary* and a *secondary* fever. The primary fever caused by the introduction of poisonous material from without; and the secondary, from the absorption into the circulation, destroyed and liquified matter which in health was a part of a solid or semi-solid organ or tissue.

The continued presence and absorption of the materies morbi may cause a continuation of what is styled the primary fever after the disease has so progressed that the local derangement furnishes material for the secondary fever; and this primary cause of the difficulty must be removed or guarded against, not only during the continuance of the disease, but during convalescence, and afterward. When the cause or causes cannot be removed, nor the patient conveyed beyond their influence, it is very difficult, and at times impossible, to make a speedy or permanent cure.

The Nerves. The presence of the initiating cause of dysentery in the blood, not only produces those symptons which the entire profession has denominated febrile, but it also, by contact, produces impressions on the nerves, which impressions will be modified by the previous condition of the nerves, their impressibility by the cause of the disease, the quantity of this morbid material in the system, the length of time it circulates and comes in contact with the nerve substance, and perhaps by the treatment adopted.

We know that opium and other narcotics continue their impression upon the nerves as long as they continue to float in the blood; and that the only sure and speedy method of relieving the patient of the harmful influence of an over-dose of opium or any other narcotic medicine, is by aiding its elimination from the system, or by the administration of something capable of changing its character and rendering it harmless, while the nerves are roused to act against the poison by other appropriate measures.

In dysentery, the nerves are greatly influenced by the morbid material brought in contact with them through the circulation as is evidenced by the condition of the mental faculties, the spinal irritation, but more particularly by the want of appetite or hunger, and the torpidity, inactivity, and consequent dry and constipated condition of the liver and small intestines; a condition which is sometimes overlooked, but nearly always present, and which demands special attention in treatment.

Those nerves which control the vegetative life of the splancnic organs, and of the abdominal viscera in particular, appear more involved than those under the control of the intellect or will. The spinal cord may be affected, but the ganglionic portion of it most; and this affection of the ganglionic nerves, in part, leads to the almost constant presence of an inert, debilitated, and constipated condition of the small intestines, with the loss of appetite, nausea, and perhaps vomiting, when the stomach also has become considerably involved.

Treatment. From what has already been written it will be seen that there are several indications to be fulfilled in the treatment of dysentery, and each must be so managed, if possible, as not to unfavorably interfere with the others.

To overcome the fever and expel or destroy the cause of it, may demand the earliest and most persistent attention. When the fever and the local disease are produced from human excrementitious matter, as is often the case where people are congregated together in large masses for temporary purposes, as camps, etc.,—and which was formerly the prolific cause of the epidemics of large cities; and also in more recent times where cities were not supplied with water from outside their limits but from wells into which the contents of privy vualts and drains must leak, as was emphatically the case with the cities of New York and Boston before the introduction of Croton and Cochituate water; it is always desirable to remove the sick from the infected locality.

That more confined localities can be poisoned in a similar manner and produce the disease in a virulent form, is proved quite often from the observed effects following the inhalation of gases from privy vualts, imperfectly stopped drains, or the accumulation of garbage and impurities around manufacturing establishments of various kinds; as well as the annual prevalence of summer complaint among the infants of cities, who play, sleep, and live, in

the heavy contaminated atmosphere of rooms incapable of being ventillated below the window sills, and perhaps supplied with air from an area or alley filled with fumes of the vault, the sink, or any accumulation of filth.

A speedy removal from such localities, even without any medication, will often be all that is required. But however beneficial a removal may be known to prove, it cannot always be adopted. In such cases, as near an approach to absolute cleanliness and purity of atmosphere, of water, room, and person, as possible, must be enjoined; and all matters dejected must at once be removed entirely beyond the possibility of producing any impression upon the sick. As well might a susceptible person be exposed to the virus of small-pox with the hope of escaping infection, as a well person, but more particulary a sick one, be exposed to the exhalations from decomposing dysenteric excretions with the expectation of escaping unharmed.

Sulphate of quinia has a well-established reputation in ague, or remittent, intermittent, and continued fevers; and ample experience has proved it to be as certainly beneficial in dysenteric fever and dysentery as in ague or intermittent. Quinia not only allays the fever, but acts directly as an antagonistic or destructive agent on the cause of the difficulty whatever may be its source or origin. It should be given in the earlier stages, frequently, and in doses such as the patient can bear and as the disease demands. It should be given as long as the disease continues, or until the local inflammation no longer furnishes a morbid material to be absorbed and carried the round of the circulation. For a reason similar to that for which quinia is given in miasmatic fevers, it should be given in this disease; and its use should be presisted in as long as its presence in the blood is required.

Small doses do not appear to act as kindly as larger ones; hence five grains, once in two or three hours, or as fast as the system is capable of disposing of it, and repeated as many times as it appears to be demanded, will be found to answer far better and require less of the salt than when given in smaller quantites. Its use should be resumed often in the course of the disease, and it does not appear to interfere in any way with other rem-

edial measures. The febrile and nervous symptoms which are caused by the morbid origin of the disease will disappear as this cause is removed; and frequently the entire train of morbid symptoms will be removed and the disease be permanently cured by the early administration of a few doses of the sulphate of quinia. Even when the disease is not eradicated, its symptons will be favorably modified and the final cure expedited by the use of this medicine.

The peculiar inflammation of the mucous membrane will demand attention. Ipecacuanha was first introduced to the profession as a specific in the peculiar inflammation of the mucous membrane of the bowels, or dysentery, caused by the introduction into the system of impurities in the air and water of the city of Paris. Quite recently it has again been employed on the ground that it exerts a specific influence on the alimentary canal, and it has proved to be exceedingly beneficial in many cases. It is given in doses of such size as not to produce vomiting or distressing nausea. It causes a flow of mucus into the small intestines, with an additional flow of bile, rousing the jejunum and illium from torpidity; and often it alone will overcome the constipation of those portions of the alimentary canal which frequently proves quite embarassing, and a dangerous complication of the disease. It is not necessary to give ipecacuanha in all forms of dysentery, for at times the upper part of the alimentary canal appears to be in nearly a healthy condition, and while there may be a discharge from the rectum once in an hour or two, there will be a natural fecal discharge once a day or so, with considerable regularity. But, as has been said, the smaller intestines are usually in a constipated condition, and physicians have prescribed castor oil, sulphate of soda, sulphate of magnesia, and other cathartics to remove this constipation. Agents of this character may be demanded; but only seldom, if ipecacuanha, oil of turpentine, balsam of copaiba, or other appropriate means are resorted to, which are known to exert a specific action on that part of the intestines.

Benzoin, or the compound tincture of benzoin, has been commended quite highly as very beneficial in dysentery by Mr. Ellis, and others; and it certainly is worthy of trial.

Balsam of copaiba has been supposed to have as beneficial an effect in dysentery as in gonorrhoea and gleet. Dr. Cullen recommended it in both hemorrhoids and dysentery. Drs. La Roche, Meigs, and others have used it, and in some instances to the entire exclusion of other treatment; and while I would not willingly depend on it exclusively, I think it should be made use of in conjunction with other remedies far more frequently than it now is. Other balsams, as tolu and Peru, and the sweet gum of the south, as well as Canada or fir balsam, are also worthy of attention. Locally, either or all of these, as well as creasote, applied as injections mixed with bland or shielding liquids, or with glycerine, will be found of great benefit at times.

Constipation. While the disease-producing agent is being destroyed in, or expelled from the blood, by quinia,—and depression of the intestinal canal is being overcome by ipecacuanha, oil of turpentine, copaiba, the balsams, etc., the fact that an obstinate constipation and retention of fœces in the alimentary tube may still exist, should never be forgotten. And if such a condition is found to obtain, the bowels must be made to empty themselves of their contents; and a proper action must be maintained during the entire course of the disease. Probably a combination of oil of turpentine and caster oil, when it can be taken, will be found as good a laxative for this purpose as can be resorted to.

At times it may be well to add a few drops of tincture of aconite, tincture of hyosciamus, or tincture of camphor to the oils. As the local inflammation has its seat in the lining of the alimentary tube, the disease cannot be cured while constipation is allowed to exist.

Injections. As has been hinted, applications can be made to the locality of the inflammation by means of rectal injections. These will subserve a variety of purposes, and when demanded should be resorted to. Cold water will relieve the tormina and heat, cleanse away the vitiated secretions and discharges, and often aid in preventing constipation, even while they diminish the frequency of the dysenteric dejections.

Glycerine, gum, starch, mucillage, and other bland shielders, may at times prove very beneficial; and with these may be com-

bined sedatives, antiseptics, astringents, or tonics, as indicated. Creasote, and the peroxide of iron often answer admirably in injections; the former when an antiseptic, astringent, and sedative is demanded; and the latter, when we wish to restrain hemorrhage, or other inordinate discharges from the lining of the rectum or colon.

Position. The patient should be kept as much as possible in a horizontal position, or with the head but slightly elevated. Standing or sitting favors the gravitation of blood to the inflamed organs, and at times, if indulged in, even after convalescense is well advanced, will produce a relapse of a grave character. Even while at stool, as little straining as possible should be allowed, with the sittings prolonged only for the briefest possible time; and in all severe case it should be prohibited entirely, the patient having an evacuation while recumbent. This is a matter of no small importance, and demands the most pointed and positive direction on the part of the physician.

External Applications. In common with all severe fevers, dysenteric fever is relieved by a free use of water, or salt dissolved in water, or alcohol and water, frequently applied to the surface by means of a sponge or cloth. These applications should always be at a temperature to make them agreeable to the patient, and not prolonged so as to produce fatigue, but repeated several times a day. Along the spine, and especially to the lower part of it, applications of a more stimulating nature may be made than are desirable to have applied to the general system. Even mustard or oil of turpentine may be often applied with benefit to the lumbar region.

General Treatment. In the consideration of the treatment of such diseases and derangements as are confined principally to one organ or set of organs there is a danger that the therapeutist may overlook the influence of a local disease upon the condition of the general system. Even when of but short duration and limited in extent, all local derangements impress the entire organism through their influence upon the nerves, the circulation, or otherwise.

Dysentery in one sense of the term, may be considered strictly local in its manifestation; yet it involves the entire nervous and

circulating systems in its influence to that extent that it requires general therapentic and hygienic attention; and this general treatment is of no slight importance or influence in not only restoring the general health of the patient, but also in aiding to control the dysenteric manifestations.

The importance and value of quietude has already been named, and if it cannot be obtained by any other means, opiates, either applied locally by means of a suppository, or injection, or introduced into the system through the stomach, should be used. Opium in its various forms and preparations has proved of great value in dysentery, and mainly if not entirely on account of the rest and ease which has followed its administration.

Aconite possesses the property of lessening the sense of pain, and also the activity of the circulation, consequently of active congestion, and in some cases is decidedly preferable to opium; but it is not capable of lessening the secretions. And as opium is used by some with the mistaken idea that its main value in dysentery is derived from its power of drying up the secretions, or rather of putting to sleep secreting organs and surfaces, aconite has not been allowed to take the place of opium as much as it should. In some instances, when constipation of the upper portion of the tube is a troublesome complication and hence the use of opium is decidedly objectionable, aconite will be found very paeful.

Gelseminum, from its known power in subduing inordinate muscular irritability and contractility, in lessening the activity of the heart, and overcoming local congestions of the mucous membrane in inflamed eyes, in gonorrhæa, and leucorrhæa, promises to be quite valuable in the treatment of dysentery. In Charleston, S. C., in an epidemic of yellow fever, its great value in that disease was fully demonstrated. In New Orleans, also, it has acquired an unusually favorable reputation. In dysentery it has not yet been fully tested, but has answered admirably in a few cases under my care.

Iron, manganese, and other blood-making agents are always required in the convalescence after dysentery. The loss of blood and other fluids, together with the absence of food, and the derangement of the digestive organs, produces an anamic condition.

which demands special medication. A want of appreciation of this condition leading to a want of proper attention, has allowed the stage of convalescence to be greatly prolonged, and in some instances, probably has prevented a favorable termination. In common, almost, with this class of medicines, may be ranked attention to diet.

The diet must be of the most bland and unirritating character, and yet sufficiently nutrious to sustain the vital strength of the patient. Beef-tea, essence of beef as it has been called: mutton, beef, or chicken broth, or better, a broth made from the meat of game; gruel, farina, and other liquid foods must be depended upon while the disease is active; but when convalescence has progressed, food of a more solid form should Fruit in its season, fully ripe, and in proper quantities, will tend to keep up a daily evacuation and ward off the constipation which otherwise would cause a return of the disease, The main difficulty has been confined to the lower portion of the alimentary tract, and as the stomach and small intestines are not involved in the acute inflammation, there is no good reason why proper fruits and vegetables should be withheld. Attention must, at times, be paid to the condition of those who have suffered from this disease, for weeks after a fair condition of health is attained. Almost as an article of diet, a constant use of aromatic and bitter plants will be required, but they do not demand any seperate mention.

As an attack of inflammation always produces debility of the organ affected, which debility may be of considerable duration, proper dietetic and hygienic oversight should continue some time, after the active disease ceased its manifestation. Many have lost their lives from want of persistent attention to those measures of diet and hygiene which should not be lost sight of for weeks after the disease has passed away.

The use of some form of aromatic bitters, in this, as in many other diseases, persisted in for a considerable period of time, even after the patient is apparently restored to sound health, will be both agreeable to the patient, and place the system in a condition to be able to ward off the causes of dysentery and other forms of disease.

BY T. C. MILLER, M. D.

QUINA IN UTERINE AND OTHER QUASSI-PERIODIC HEMORRHAGES. In the Charleston Medical Journal and Review, Dr. T. S. Rich, of Perry, Ga., gives us his experience with quinia in this complaint. But he used it in combination with other old well tried agents, as creosote, tannic acid, sulphate of iron, etc. Which was the most effective agent used?

Peruvian Bark is an old remedy which has been tried in menorrhagia, according to the testimony of Bergius, Formey, Vogt, Kopp, Rave, and others. Æsterlen and M. Frank recommended quinia to be used in menorrhagia; and Martinet, Sandras, Cramer, and Haxthausen in hemorrhage of a periodical character. Lesseng especially lauded it in periodic hæmorrhage from the urinary and reproductive organs, when of a passive character.

Dr. Carl Kassel states in his Pharmacodynamia, "Peruvian bark, and its preparations affect, in small doses, primarily, the spleen; in large doses it effects the heart. The effects upon the brain and spinal marrow are only secondary, caused through its influence on the spleen. From its manner of action we commonly say it is a tonic, but in that way a part only of its action is expressed."

Quinia causes an alteration of the blood. It increases the amount of the fibrine, but lessens the number of red corpuscles of the blood.

The uterus sympathizes closely with the condition of the abdominal viscera; and hæmorrhage from it often, in fact usually, depends upon a primary affection of either the blood, liver, spleen, kidneys, intestines, or of the nervous system. This fact has been recognized by Rademacker, Kissel, M. Frank, and Wunderlick.

I have frequently arrested profuse menorrhagia with a single dose of eight grains of sulphate of quinia dissolved in forty drops of the tincture of gelseminum.

STEVENNIA IN CHRONIC INTERMITTENTS. Dr. Harrison, of Arkansas, recommends, in the New Orleans Medical News and Hospital Gazette, the use of strychnia and quinia in chronic intermittents. This idea is not new. Ludovic prefered a combina-

tion of gentian with small doses of nux vomica. Wedel relates, that a tailor cured a great many cases of chronic intermittents with nux vomica. Buchner, Hartmann, and Janghans spoke highy of this mode of treatment. Marcus, Fresh, and Horn commend it.

Hahnemann, in 1793, before he adopted his infinitesmal doses, used St. Ignatius's bean in these cases, so also did Prof. Hasse, in 1822. Desbois used the bean in obstinate intermittents, but found that even in patients otherwise healthy and strong it caused disturbance of the nervous system, delirium, and even mania,

Rademacker praised strychnia in combination with quinia, provided the disease was complicated with hypersemia of the liver.

Dr. Carl Kissel, in his Pharmacodynamia, says: "Nux vomica and its preparations primarily affect the spinal marrow, particularly the motor nerves; and secondarily, the rear nervous cord and thence to the organs connected therewith. In particular our trials have shown that very small doses influence the gall-ducts, and produce a strong movement in them." He speaks highly of it in intermittents, and in muscular rheumatism. Dr. Brainard of Chicago, in 1847, Dr. Kennedy of Tennessee in 1850, and Grimmand in 1852, have recommended strychnia in intermittents.

Landerer in 1851, and Hassenger in 1852, spoke in praise of the combination of strychnia and quinia in this form of disease.

It is a well known fact, that in our Southern States, ninety cases of every hundred of intermittent fever, are complicated with a hyperæmia of the liver. I have succeeded well with very small doses of nux vomica, or of the alcoholic extract, in a short space of time. Over twenty-eight years since, I gave it to patients of mine, with intermittent fever and a feeling of soreness and tenderness on pressure with the fingers at the second and third vertebral spaces. While that tenderness continued I observed that the fever and chill would return even if three or four weeks intervened before the return. They required treatment as long as that tenderness remained.

In some of those very obstinate cases, a solution of *phosphorus* removed the disease in a few days.

CHALYBEATES IN DYSENTERY. Last autumn there came five cases of dysentery under my observation and treatment. The majority of these cases had previously been unsuccessfully treated by other physicians, but with a continued increase of the disease,—my own ordinary treatment also proved unavailing.

On examination I found the urine quite alkaline. The muscular debility was very great. I hence concluded that the blood had become affected, and gave the muriated tincture of iron, and also to some of the patients the acetic tincture of iron. Under the use of the chalybeates the patients recovered in from four to seven days.

Galen used iron in dysentery, and particularly his serum lactic chalybeatum. Horst recommended an aqua chalybeata. Fabrilitius Hildanus speaks from his own experience quite strongly in favor of iron in some forms of dysentery. Zollickoffer recommends the Prussiate of iron in dysentery when the inflammatory condition has subsided. Carl Kissel says that recently dysentery has frequently demanded iron for its cure.

RABIES. Perhaps a few notes on the treatment resorted to in this disease may not be out of place.

- 1. Cannabis Indica lessens the misery greatly.
- 2. Conia.
- 3. Empatorium cannabinum herb has been used as a preventative in Russia.
- 4. The root of the Gentianse cruciats in doses of one and a half ounces early each morning.
 - 5. Guaco leaves.
 - 6. Lycopodium herb.
- 7. Spirea ulmara root. Barron Von Budberg, and Dr. Krebel recommend this.
 - 8. Chlorine water as a wash.
 - 9. Vinegar as a wash, and taken internally.
 - 10. Asclepias.
 - 11. Cratægas terminallis.
 - 12. Euphorbin Vellosa,
 - 13. Gentiana anarilla.
 - 14. Belladonna.

- . 15. Strammonium.
- 16. In Russia, the following plants have at various times been tried. Alisma plantago, Campanula, Gentian, Polemonium, Hypericum, Thalictrum, Peresor, Cichorum, Genista, Tanzy, Anagallis, Ranunculus, Polygala bistorte.
 - 17. Russian steam baths.
 - 18. Sabadilla.

NOTE. This long list of remedies proves that no mode of treatment has stood the test of experience. Ed.

Cannabis Indica Seed. An emulsion of this seed was a favorite remedy with Rühter, Hüfeland, Wolf, Brückner, and others, in gonorrheea; and is still retained in the tavor of some practitioners in Germany. I have used it successfully in obstinate gleet.

Solidago, and Virge Aure. The last named herb was much used by Muhrbeck and Heim in affections of the kidneys, and in lithiasis. It is an old remedy among the Cossacs on the river Don in Russia, in strangury and a paralytic condition of the bladder. It is also used externally in excoriations.

BOOKS, PAMPHLETS, ETC.

The past month has been somewhat prolific in the production of publications of interest to the profession; and among the more novel, pretending, and important books, no one is likely to command more attention than a work on *Electro-Physiology* and *Electro-Therapeutics*, written by Alfred C. Garratt, M. D. of Boston, and published by Ticknor and Fields.

In this work the author has endeavored to include all that is known in regard to the application of Electricity in the treatment of disease, and a full and comprehensive description of all the various appliances and apparatus used by the profession, illustrated with carefully prepared and well executed wood-cuts.

It is an elaborate and comprehensive presentation of important scientific and therapeutic facts, too seldom even slightly understood by the profession. The Publishers have done their part admirably, making the book a *model* one, as regards typography, illustrations, and paper. The only objection that can be raised, is, that they have made the book too good; and that its expensive-

ness may limit its sale. It came through the house of Rickey, Mallory & Co. Price \$4.00.

Professor Martyn Paine, the champion of the Medical Profession in America, has sent me a copy of the fifth edition of his great work, first published some thirteen years since, on The Institutes of Medicine.

Since this great work was first published, the opinions advanced have been criticised and the book reviewed so often that the author and his book are or should be well known to the profession. And, although some have seen fit to attack it and its author in a manner by no means gentle or just, the constant demand for it indubitably proves that those attacks have made but little impression upon those who read them. The book is a noble monument to the erudition, industry, and fearless independance of its author.

D. Appleton & Co., of New York, have furnished me through the house of Rickey, Mallory & Co., the second volume of The Physiology of Common Life, by George Henry Lewis.

This second volume is confined to a consideration of the phenomena of feeling and thinking, the mind and the brain, our sensation and emotions, sleep and dreams, the qualities we inherit from our parents, and life and death.

It is remarkably well and clearly written, and deeply interesting.

For some years past, scientists have been engaged in endeavoring to determine the origin of species in plants and animals, but more particularly in man.

Dr. Caldwell of Louisville, Moreton, Nott, Gliddon, Maury, Pulszky, Miegs, Leidy, and Agassiz, as well as a host of European savans, have furnished the world with information and ideas of great value on this deeply interesting subject.

But the latest work, and one that at the present time is commanding the attention of the world, is one on the *Origin of Species by means of Natural Selection* by Charles Darwin, and published in New York by D. Appleton & Co.

As this is professedly but an abstract of a work the author has been twenty years engaged upon, it may be proper to wait until the larger one is completed before venturing upon the express

sion of a positive opinion. As at this time presented, I can discover no good reasons for adopting the conclusions of the author.

Prof. Alphonso Wood, whose Class-book of Botany has rendered his name almost a household word throughout the United States, has recently been collecting valuable additional matter, and at present is engaged in preparing a revised, improved and greatly enlarged edition of his work. It will be published by A. S. Barnes, and Burr, of New York, in *Parts*, as fast as prepared. Parts I., II., and III. are already issued, and make a beautiful and valuable little book.

Not often do such works as Leaves from a Bachelors Life, by Francis Copcutt, and published by S. A. Rollo, of New York, command a notice in my journal. But this is gotten up in such an unique and beautiful style, on tinted glazed paper, with the clearest of type and the blackest of ink, and so thoroughly and beautifully bound, that it is but natural to conclude that the stories of which it is composed, are well written; and that the book will be received with favor.

The British and Foreign Medico-Chirurgical Review, the London Lancet, the North American Medico-Chirurgical Review, the American Journal of Pharmacy, and nearly all the other medical journals published in America, are received regularly in exchange. At present there is only space to commend them to the favorable notice of the readers of the JOURNAL.

Dr. W. H. Gantt, of Union Hill, Texas, has sent me a little, but useful pamphlet, containing some thoughts on the *Use* and Abuse of the *Uterine Speculum*, and on *Uterine Polypus*. It is timely and valuable.

A communication from Dr. Nathan Bozeman to the New Orleans Medical and Surgical Journal, on the Application of the Button Suture in the treatment of Variouse Voins, republished in pamphlet form, is well deserving careful consideration.

A NEW TREATMENT FOR ASTHMA.—Dr. Courty, a Professor of the Medical School of Montpelier, France, has been treating asthma by subcutaneous injections of a solution of the sulphate of atropina over the course of the pneumogastric nerve. He makes a puncture on the inner edge of the sterno-cleido-mastoid muscle directly over the sheath of the great vessels of the neck by means of a trocar and canula, to the distance of fifteen millimetres, and then injects a few drops of the solution so that it may come in contact with the sheath of the great vessels. His experiments are reported to have been remarkably successful. To counteract the specific effects of the atropina, Dr. Courty administered opium with success.

EXCORIATED NIPPLES.—Dr. Pierce, of Cedar Falls, Iowa, writes as follows:—I have seen the stramonium ointment, as well as the whole list of astringent and stimulating preparations, used for the above named complaint, but no other preparation which I have seen used has been so universally followed by good results, as that made after the following prescription:—

Br Acid, tannic, grs. xx; Glycerine.

Alcohol, ấá 3 j.

M.

The result of my experience with this preparation has been such that I am confident if women who are afflicted with this distressing complaint would make a prompt use of this mixture, they might, in almost every instance avoid resorting to that "disagreeable alternative,"—the use of the shield.

A NEW METHOD OF APPLYING CHLORIDE OF ZING.—The following formula is recommended by Dr. G. W. Spence, of England, for a chloride of zinc paste. Dissolve fifty grains of prepared chalk in two drachms (by measure,) of commercial muriatic acid; dissolve one hundred and fifty grains of sulphate of zinc in two fluid drachms of boiling water. When required for use, mix the two solutions, and the result will be a paste weighing near an ounce, and containing about one-sixth of pure chloride of zinc.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

ACID, PYROGALLIO. Pyrogallic Acid. Prepared from the dry aqueous extract of galls, by dry distillation in small retorts or in Mohr's Benzoic acid apparatus. It has not been used in medicine, but the photographers make considerable use of it in combination with silver because of its great sensitiveness to light. It is also used in making hair-dye to change light hair to brown or black.

Acid, Pyroguaiacic Acid. One of the pro-

ducts of the destructive distillation of Guaiacum.

Acid, Pyroligneous Acid. An acid obtained from the destructive distillation of wood in iron cylinders in the preparation of Acetic Acid, and can be obtained also from wood tar by distillation. See *Pyroligneous Acid*.

ACID, PYBOLIGNIC. Pyroligneous Acid, which see.

ACID, PYROMECONIC Pyromeconic Acid. Obtained by the dry

distillation of Meconic acid.

ACID, PYROPHOSPHORIC. Pyrophosphoric Acid. One of the three modifications of Phosphoric acid. Monobasic phosphoric acid.

Aon, Pyrotable. Pyrotartaric Acid. The crystalline acid produced by the destructive distillation of Tartaric acid. The other acid produced by distilling tartaric acid, Pyruvic acid, is an oily liquid.

Acid, Pyrnvic Acid. An oily acid obtained by the

distillation of Tartaric acid.

ACID, QUERCITRIC. Quercitric Acid. A crystalline, yellow,

bitterish acid, obtained from Quercitron bark.

Acid, Quercotannic. Quercotannic Acid. An acid in many regards like Gallotannic; but it does not yield any gallic nor pyrogallic acid.

ACID, RACEMIC. Racemic Acid. Paratartaric Acid. Uvic Acid. An acid found in the Creamortartar, or Cream of Tartar

of certain localities.

Acm, Rhabarberic. Rhabarberic Acid. The yellow chrystaline granular matter of rhubarb. Chrysophanic Acid, when not quite pure, is known by the name of Rhabarberic Acid. It is obtained by means of ether with Robiquet's displacement apparatus.

Me Acm, Rheic Acid. Chrysophanic Acid. Obtained

by ether from Rhubarb root.

Acid, Rhobanic. Rhodanic Acid. Sulphohydrocyanic Acid. Obtained from the seeds of several plants of the order Crucifera, especially from mustard seed. It is usually prepared artificially by fusing powdered anhydrous ferrocyanuret of potassium with

the flowers of sulphur at a moderate heat, dissolving the mixture in water, precipitating some oxide of iron by means of potassa, filtering the solution, evaporate it to concentration, and distilling

the concentrated solution with phosphoric acid.

It has been used by Dr. Turnbull in diseases of the eye of a torpid or paralytic character, by exposing the eye for a half a minute to the vapors of the acid poured upon a sponge in a phial, and the mouth of the phial applied around the eyeball.

Acro, Ricinic Acid. One of the three fatty acid

products of saponification in Castor Oil.

Acro, Ricinoleic Acid. Obtained by decomposing the Ricinolein of castor-oil. By Lecanu it is supposed to be a compound acid, composed of Ricinic acid and Elaiodic acid.

Acm, Rottleric Acid, Obtained from the hairy

covering of the fruit of Rottlera tinctoria.

Acid, Ruberythrynic Acid. Obtained from

the root of Rubia tinetorium, or madder.

Acm, Rubinic Acid. Obtained from the decomposition of Catechuic Acid; which is obtained from the leaves of the shrub Uncaria gambier, or Catechiu.

ACID, SABADILLIC. Sabadillic Acid. Cevadic Acid. Obtained by the saponification of the oil of Cebadilla, or the seeds of the

Asagræa officinalis.

ACID, SACCHABIC. Saccharic Acid. Obtained by acting upon sugar with Nitric acid. Also known by the names Oxalhydric acid, and Hydro-oxalic Acid. Used in the formation of the Saccharate of Lead.

ACID, SALACYLOUS. Salacylous Acid. Spirous Acid. Obtained by the oxydation of Salicine, and Populine, and also by the

fermentation of Helicine.

ACID, SALACYLIC. Salacylic Acid. Spyric Acid. Obtained

by treating Salacylous acid with potassa.

ACID, SANTALIC. Santalic Acid. An acid obtained from some of the Phanerogamic plants.

Acid, Santonic. Santonic Acid. Santonine. Prepared from

the seeds of the Levant Wormseed. See Santonine.

Acid, Smilasperic Acid. Hemidesmic Acid. Hemidesmin. Obtained from the root of the Hemidesmus Indicus by Mr. Garden. See *Hemidesmic Acid*.

Acm, Spirous Acid. Salicylous Acid, which see. 4
Acm, Stearic Acid. Obtained from Stearine by

saponification.

Aoid, Strychnic. Strychnic Acid. Igasuric Acid. Obtained from the seeds of Nux vomica, St. Ignatius' bean, and from Snake wood.

Acm, Succinic. Succinic Acid. Acid of Amber. Sal Succini. This acid is obtained in the distillation of Amber, by the oxidation of Stearic and Margaric acids, or by digesting those acids or Spermacitti or Tallow for several days, warm but not boiling, with nitric acid of medium strength, and evaporation. It may also be prepared from the fermentation of impure Malate of Lime. It has been obtained, for a long time, from amber, by distillation.

Succinic acid was known to Agricola and described by him in 1546, he calling it amber salt. Boyle in the seventeenth century recognized it as an acid. Lowitz in 1793 showed how to purify this acid by means of charcoal. Berzelius determined its ele-

mentary constituents.

Succinic acid is found in amber in combination with oxide of calcium as succinate of lime. According to Lecame, Serbat, and Unverdorben, it is found in small quantities in turpentine. Cerutti obtained it from a resinous fossil called retinit. Zwenger met with this acid in wormwood (Artemesia arbornthium,) combined with potassa, as an acid salt. It can be artificially procured, according to Bromeis, by the oxidation of enargaric and stearic acids, with nitric acid; or as Ronalds has demonstrated, by oxidizing vellow wax with nitric acid. When amber is submitted to distillation in a retort that has a tubulated receiver attached to it and heat applied, a yellow acid liquor, and afterward a thin oil of a yellowish color, passes over, and a waxy substance is found in the neck of the retort and upper part of the receiver. If the heat is continued, the oil slowly assumes a deeper color until finally it become black and of the consistency of pitch. The oil obtained is called oil of amber, and the liquor which has an acid reaction, is impure succinic acid, yielding crystals by evaporation. The acid thus obtained is very useful for medical purposes, and has the odor of the oil. To purify and deodorize it entirely it must be boiled with nitric acid, evaporated to dryness, re-dissolved in hot water, digested with pure animal charcoal, filtered, evaporated and crystalized. It forms white, inodorous, prismatic crystals, having an acid taste; at 140°R, they are decomposed into water and a sublimate called Succinid, which can be re-converted into succinic acid by boiling with water. Succinic acid melts at 180° R. and boils at 285° R. evolving vapors which irritate the respiratory organs; and when sublimed assume long needle-like crystals. It is soluble in twenty-five parts of cold, and two parts of boiling water; in three parts cold and one and a half parts boiling alcohol; and also in ether. The solutions have an acid reaction. Chlorine and nitric acid produce no effect on it. heating with sulphuric acid and deutoxide of manganese, acchie and carbonic acids are formed; when brought in combination

with caustic potassa, oxalic acid is produced.

Succinic soid is said to possess stimulant and anti-spasmodic properties, (see Amber,) and to promote perspiration and the excretion of urine. It was formerly much used on the continent of Europe in gout, rheumatism, suppressed eruptions, cramps, etc. The dose was from five to twenty grains. The Prussian Pharmacopoeia makes the Succinnate of Ammonia officinal. See Amber.

Acid, Sulpharsenious. Sulpharsenious Acid. Tersulphuret of Arsenic. Orpiment. Prepared by adding sulphuretted hydrogen water to a solution of Arsenious acid, and adding to the yellow liquid thus formed a few drops of strong hydrochloric acid.

when the Sulpharsenious acid falls as a precipitate.

Acid, Sulphocholeic Acid. Taurocholeic Acid. Obtained from fresh ox-gall by precipitation with sugar of lead.

Acid, Sulphohydrocyanic Acid. Rho-

danic Acid, which see.

Acid, Sulphosinapica. Sulphosinapica. Sulphosinapisin. Obtained by Henry and Garot, from the seeds of the Sinapis alba or White Mustard.

Acid. Sulphovinic Acid. Ethereosulphuric Acid. Produced by adding oil of vitriol to rectified spirits.

Acm, Sulphure. Sulphuric Acid. Oil of Vitriol. Made by burning sulphur and nitrate of potassa together in leaden chambers. More than a thousand years ago it was described by Geber. It is found in the waters of volcanic regions as the result of the combustion of sulphur. The Vinegar river of Columbia owes its acidity to the sulphuric acid dissolved in its waters. In Java there is a river whose waters are rendered acid in the same manner. The sour springs of Bryon, Genesee Co., New York, contain pure sulphuric acid. In Persia, a large tract of ground is rendered sour by it.

In plants it is found in combination with potassa, and soda; and in man it has been discovered by Berzelius as one of the

constituents of the urine.

The oil of vitriol of commerce is very seldom quite pure. It usually contains too much water, so that its strength is below the officinal standard; it may contain some hydrochloric acid, the result of using impure nitric acid in its manufacture; frequently there is hyponitious or nitric acid in it from the same cause; and almost always there is some sulphate of lead derived from the leaden walls of the chambers in which it is made. When pyrites have been used in its manufacture, arsenious acid can almost always be detected in it. Cork, straw, or other organic matters may discolor the acid.

Commercial sulphuric acid should be of the specific gravity of 1.843 F. When sulphuric acid is pure it is entirely colorless, without odor, oily looking, not quite twice as heavy as water, and of an intensely acid taste.

Monohydrate of Sulphuric Acid has a specific gravity of

1.845 F. It is dense, colorless, and of an oily consistency.

Binhydrate of Sulphuric Acid, sometimes called Congealable Oil of Vitriol and also Eis öl (Ice oil,) has a specific gravity of 1.78 F. It readily freezes into large, hard, regular crystals in cold weather. When solid it is called Frozen Sulphuric Acid.

Terhydrate of Sulphuric Acid, has a specific gravity of

1.632 F.

The Commercial Oil of Vitriol is seldom of the specific gravity ordered by the Pharmacopœias, but it is the acid used by many dispensing apothecaries. It is not often used in this country as a medicine, some of the officinal diluted preparations being

prefered.

Sulphuric acid, properly diluted, possesses the ordinary acid properties of the acid (see Acids,) which are found in a more desirable form in those acid of a vegetable origine, which, by becoming more highly oxidized are convertable, in the system into Carbonic acid. It also, in addition contains sulphur (see Sulphur,) which gives it a specific action on the skin, the mucous membranes, and upon the nerves.

As an acid, it has been used with great benefit in many febrile and inflammatory diseases where its peculiar properties were not contra-indicated. It diminishes thirst, allays preternatural heat

and promotes digestion.

The sulphur in combination with the oxygen renders it an admirable agent toallay the heat and to overcome the debility of the skin and the annular muscles surrounding the minute cutaneous vessels and pores of the surface of the skin, as well as to act in a similar if not identical manner on the annular muscles of the mucous surfaces. It is hence of great value to check the colliquative and other inordinate night sweats and inordinate mucous discharges that often accompany and follow fevers and inflammations. To check night sweats, however produced, no agent has been discovered equal to sulphuric acid or some of its officinal preparations.

In inordinate, or catarrhal discharges from mucous surfaces, it is nearly as efficaceous as in checking excessive perspiration. So also, in controlling *passive* hemorrhages. But when a larger blood-vessel is ruptured, or where the hemorrhage is kept up by vascular or nervous excitement, it has not proved of any great value except when applied to the point of hemorrhagic discharge.

In hemorrhage from the stomach it proves far more beneficial than in bleeding from the nose, the lungs, or the uterus. In purpura hemorrhagica and in scorbutis, although it may prove beneficial to the general health, it has not manifested much control over the loss of blood.

In various forms of skin diseases, as lichen, prurigo, and in chronic nettle-rash, it has proved of value both when taken internally and when applied locally in the form of wash or ointment. Where the stomach has long been affected with dyspepsia and catarrh or pyrosis, it has been found preferable to any other acid.

Locally, if applied in an undiluted form, it acts as a caustic; but does not appear in any regards preferable to other caustics, while its liquid form renders it somewhat difficult to manage under some circumstances. In bites of a dog or a venemous reptile its liquid form would enable it to penetrate into the recesses of the wound and thus reach parts that could not be touched by the nitrate of silver or any other solid. It has been applied to a portion of the eyelid in entropium, so that as the skin sloughed the cicatrix on healing should produce contraction and cause the eyelid to turn Mr. Guthrie and Mr. Lawrence have both used it thus for that purpose. Mr. Guthrie has applied it to the inner side of the eye lid in extropium, that the eyelid might be made to turn in, with success. An ointment and wash of this acid have been used to check hemorrhage where the bleeding was from the rupture of several small vessels. Diluted with water, it has been used as a wash for the mouth and a gargle for the throat, especially where there was long standing inflammation and great vascularity. For these purposes, however, it appears every way inferior to Vinegar or Lemon Juice. An ointment made by adding one drachm of the acid to four ounces of lard, has proved an admirable ointment for the cure of scabies, or itch. It has no odor, and may be scented with any of the essential oils.

Internally it is usually prescribed under the name of Diluted

Sulphuric Acid, made as follows:-

R Sulphuric Acid, f3j. Distilled Water, f3xij.

Or in the form of the Aromatic Sulphuric Acid, frequently called Elixir Vitriol, made as follows:

R. Sulphuric Acid, f3iijss.
Ginger, in coarse powder, 3j.
Cinnamon, do 3jss.
Alcohol, q. s. to make two pints,

Add the acid gradually to Oj. alcohol, and allow the mixture to cool. Mix the ginger and the cinnamon together, and put them in a percolator, pour the alcohol gradually into the percolator and let it pass through to form a tincture, to which add the mixture of acid and alcohol.

[To BE CONTINUED.]

SUN-STROKE.

This name has been applied to a well-known, and remarkably fatal disease of the hot season of the year; and as the name has frequently misled as to the nature and cause of the disease, a brief abstract of the report of Dr. Boisliniere, coroner of St. Louis County, Mo., seems timely.

After the 11th of August, 1858, and during the heated term of 1859, Dr. Boisliniere saw 72 persons who had died from this malady, which he classified as follows:—

Cases	occurring	in the streets, alleys, or the leves	31
66	"	under roofs	25
66	66	in low sultry underwoods	7
66	66	lumber, brick, and wood yards	4
"	66	privies	
44	44	milkman in his wagon	1
66	66	cabman on his box	
EP.	Cotal		72

It will be perceived that more than half of these cases occurred where the sunshine could not reach the patient, and from other sources we know that most of the others occurred on days and in times which the sun was not shining.

On Post Mortem examination, the brain was usually found healthy. The lungs and heart, in every case were more or less congested, the pulmonary artery generally containing black and liquid blood. The liver and spleen were usually enlarged, and the spleen softened.

The cause of the disease, without doubt, is not the action of the direct rays of the sun, but a hot, rarified, and impure atmosphere, acting on the blood and the respiratory and circulatory organs.

In the *Treatment*, bleeding never does good, but dry cuppings over the chest, and large sinapisms, proved of value. The writer says that the experience of the profession in America is now unanimous that stimulants are the sheet anchor in sun-stroke.

The vital powers, in this disease are depressed, and hence the need of an immediate and permanent internal stimulant, as carbonate of ammonia, the tincture of ginger, or pirckleyash berries, sweet spirits of nitre, or Hoffmann's anodyne, in small doses, but repeated quite frequently.

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INTERMITTENT FEVER.

BY THE EDITOR.

By far the most common cause of Fever, in many regions, is the miasm produced by the decomposition of dead vegetable matter, when that decomposition is favored and aided by the action of the atmosphere, and heat, and moisture, upon dead vegetable matter exposed to the action of their com; bined influences. This missm, or as it is frequently called, this malaria, produces a specific deleterious influence upon persons exposed to it, that is liable to result in those forms of disease which the English include under the term Aque, the Americans often call Fever and Aque, and the nosologists Intermittent Fever,

Intermittent Fever, although it always owes its origin to one determinate and distinct producing cause, assumes different varies ties of form as the condition of the system of those on which it acts may vary; and three of these varieties have been recognized by writers as sufficiently peculiar to justify distinctive applications, Sometimes these varieties are again divided, forming sub-varieties, but neither the sub-varieties nor the varieties require any more modifications in the course of treatment proper to be pursued than is necessary with many other forms of disease falling under one division.

The varieties universally recognized in intermittent fevers are:-Quotidian Ague, Tertian Ague, and Quartan Ague. These are often sub-divided into the Double Quotidian, Double Tertian, Duplicated Tertian, Tripple Tertian, and Double Quartan. Some nosologists have endeavored to extend the primary divisions so as to include what they have called Quintian Ague, Sextan Ague, Octave Ague, etc., etc., but this seems a useless attempt at an extension of the classification. The most simple method seems to

be that of the English, who treat of all these varieties under the general name of *Intermittent Fever*, or *Ague*, while the different varieties are spoken of as simply various manifestations of the one disease.

Intermittent Fever is characterized by various peculiar sympfoms; but as its name imports the most marked among them is
the entire intermission of all febrile symptoms, for a time, which
appear at other times in such marked and peculiar manner
that their appearance has been properly called a paroxysm. A
certain series of morbid symptoms present themselves, but as
they pass away the patient seems to have entirely recovered
his health; and did not the paroxysm return again and again with
regular intervals of freedom from fever intermitting, we should
hope that convalescense was established, and the attack but a
brief appearance of illness. The regular and constant recurrence
of the disease, however, proves that the system has not freed
itself from the materies morbi, although it may at times manifest
such amount of vital force as holds the disease in check.

When the paroxysm of Agne occurs each day with regular intervals of intermission, it is spoken of as the Quotidian variety of Intermittent Fever. When the paroxysm does not return daily, but comes on every alternate day it might with propriety be called the Secundian variety, but in reality, by common usage it is called the Tertian variety. When there is a paroxysm of ague with two whole days of remission and another attack on the third day, regularly, it is styled the Quartan variety.

When the paroxysm recurs every twenty-four hours or thereabouts, as in the quotidian variety, the attack is probably more frequent in the morning than in any other part of the day; and imay continue from six to twelve hours. This variety has been supposed to be more frequently met with in the spring time than in the other seasons. When the paroxysm returns each alternate day, as in the tertian variety, the attack is apt to be near the middle of the day, and to last four, five, or six hours. This variety is met with both in the spring and in autumn. When the paroxysm returns once in three days, after an interval of about seventy-two hours, it usually comes on in the afternoon and continues only for a short time, manifesting itself mostly through the cold stage of the attack. This form of the disease is more

frequently met with in autumn than in other seasons of the year.

Although the recurrence of the paroxysms are usually sufficiently regular to make it proper to distinguish the varieties as here indicated, cases occur where the paroxysms are so extremely irregular in their reappearance as to set all rules at defiance, and hence the want of agreement in the nomenclature used by different authors. Authors have differed also in the ideas attempted to be conveyed by the terms interval and intermission. The word interval, as used in reference to this disease, includes the space of time from the commencement of one paroxysm to the commence ment of the next paroxysm. The word intermission, refers to the period of time after the complete ending of one paroxysm to the commencement of the next one, or the space of time when the patient appears free from disease. When the period of intermission is well defined, and the disappearance of the disease is complete, the patient may well be said to labor under Intermittent Fever; while some writers have supposed if the disease was identically the same, and yet the intermission was only partial or incomplete, the disease should be called Remittent Fever. I do not entertain exactly that opinion, but believe intermittent fever and remittent fever to be distinct diseases, having different producing causes, but yet in many regards very closely allied to each other

Cause. Very many attempts have been made to determine with certainty in regard to the cause of ague, or remittent fever; and while the result has been to determine with great accuracy where the disease abounds and many of the conditions that favor its development, yet after years of patient, devoted, and scientific research and investigation with most physicians the matter remains undecided, and those who have come to a settled conclusion are free to admit that the conclusion is more a matter of conjecture than of positive proof.

Without attempting to establish the correctness of my own conclusion, or even to present a few of the many reasons that have led to its adoption, I prefer simply to repeat, that I now think that all varieties of Intermittent Fevers are caused essentially by the introduction into the blood, either through the air inspired, or the water drank, or in both ways, of a miasm pro-

duced by the decomposition of dead vegetable matter that is acted upon by heat, by moisture, and particularly by the atmosphere. This I now think to be the essential cause of this form of fever.

I know that green vegetable matter does not usually, even when allowed to putrify in large masses, produce Intermittent Fever. Neither does putrifying animal matter. But where there has been an accumulation of dead vegetable matter, as in the soil or in the forests, and that vegetable matter, by upturning on sultivating the soil, or clearing away the forest, has become exposed to the combined influence of warmth, moisture, the rays of the sun, and particularly to the air, Ague has been manifested, and it has continued to prevail year after year, until the earth has been drained, or the long continued prevalence of the causes that produce miasm has exhausted the materials on which that dependator existence.

Symptoms. The first symptom of an ague fit, or of any of the various forms of Intermittent Fever is,—a sensation as of fatigue with debility and depression at the pit of the stomach, followed by a feeling of weakness or of a languid and listless condition of both body and mind as though the patient is unequal to any exertion either mental or physical. After a short space of time the patient feels like sighing and yawning, and stretching his muscles like one awakened prematurely from unfinished sleep. Soon after this there is experienced a feeling of chilliness, at first along the course of the spine; the external capillaries shrink and the surface appears blanched, pale, with shrinking of muscles of the face and dryness of the skin, which appears rough like that of a plucked goose.

Soon a sensation of actual coldness is felt, first at the back, but quickly over the entire system, until the patient feels and acts and looks like a person exposed to intense cold, even if the external temperature is quite warm. He trembles and shivers, his teeth chatter, his knees knock each other, his hair appears rough and bristly, his cheeks, face, lips, nose, ears, and nails turn blue; his skin, muscles, and fingers, are shrunken; his breathing becomes quick and anxious, and his pulse becomes feeble; he has pain in his back, loins, and head; the secretions are usually checked, and while he may urinate frequently, but a small amount will be

resided at a time, and that pale and limped; his bowels are quite often confined; and his tongue white but dry. Such is the appearance of the patient during the ague fit, or what has been called the cold stage of Intermittent Fever. This cold stage lasts from a few minutes to an hour or more according to the severity of the attack, being usually much less marked in the Quotidian and Tertian than in the Quartan varieties, so that the rule is,—the longer the interval between the paroxysms the shorter will be the paroxysm; but the longer the cold stage.

The daily ague, or Quotidian, is the form more commonly met with in practice, but the other forms are not uncommon in miasimatic regions of country. Miasm sometimes produces all or many of the other symptoms of Intermittent Fever, without any marked or distinct paroxysm. There may be heat and sweating, but no chill or ague; or the patient may have chills, or shakes, but no marked subsequent heat or sweating; or the sweating stage may be noticed, not having been preceded by either the ague or heat. This peculiar modification of Intermittent is often called *Dumb* ague.

But, however regular or irregular the recurrence of the chilis may be, whether presenting themselves daily, or at regular intervals, or otherwise,—usually after the pain, distress, and chilliness of the cold stage has continued for a time, the chilliness alternates with flashes of heat, commonly first felt around the face and neck, and from thence extending over the entire surface, until the sensation of coldness entirely ceases and the patient manifests the appearance and experiences the warmth of heat.

But the change in the condition of the patient continues until the face becomes congested and the capillary vessels are filled with arterial blood, the surface is hot and dry, the temporal arteries swell, the congestion produces a peculiar form of headache, the temporal arteries throb, the pulse beats with rapidity, and the nerves are affected with a sensation of discomfort and restlessness.

Another change still, follows in order of sequence, in the majority of cases. The skin gradually becomes soft, moisture breaks out on the forehead and upper lip and over the entire surface, accompanied with a feeling of relief from all the distresses and discomforts of the hot stage; the thirst ceases, the mouth and

tongue become moist, the urine is secreted copiously, the pulse and heart resume their normal action, and the patient appears to be nearly well again. It is this regular disappearance or intermission of all the febrile symptoms that characterize this fever and gives of it its popular as well scientific name, and shows the identity of the producing cause in all the varieties met with.

. But it should ever be borne in mind, that the effect of exposing the nerves to any considerably continued attack of Intermittent Fever, is to leave them most remarkably susceptible to even very slight impressions for a long time thereafter, the same as the nerves are left most remarkably susceptible to the presence of lead in the system of those who have been poisoned by that metal.

Persons never have this form or these forms of miasmatic fever, except they have been exposed to the producing miasmatic poison, as persons never have any form of lead disease except those into whose system lead in some form has been introduced. But those whose systems have once been poisoned by lead are afterwards liable to suffer from the introduction of an exceedingly small quantity of it into their system. So, those who have suffered from ague are liable to feel the hurtful impression of an exceedingly small amount of miasm, or even a change that to others would be entirely imperceptible and not productive of the least discomfort.

The conditions necessary to the production of considerable quantities of this missm—march missm, or paludal poison, as it has been called,—do not obtain in well cultivated countries where the soil has for a considerable period of time been exposed to the combined action of the sun's rays and moisture. But even such regions may produce this poison in sufficient quantities to impress those whose systems had once been poisoned by it.

The miasmatic poison finds lodgment in the blood, apparently through the air breathed, and also through the water drank, wherever the air and water are charged with it; and as long as it remains in the blood it is liable to make hurtful impressions on the nerves.

But it also makes very marked impression upon those organs through which the blood flows, particularly the liver and spleen; and upon the vessels and the structures adjoining where the

blood flows from the arteries and before it reaches the veins—the capillary vessels. The liver is so greatly affected by it that in some regions intermittent fever is called the *Bile* fever, and frequently the word *Billious* is appended as a prefix. The spleen quite often suffers a very great enlargement and even induration, in those exposed to miasm. This peculiar condition of the spleen is so well known to be the result of the producing cause of ague that it is usually denominated *Ague cake*.

Treatment. In the treatment of Intermittent Fever the specific nature of the producing cause must not for a moment be lost sight of. There may be many other things required to be done to stay the ravages of the disease and restore the system to health, but the specific producing cause must be neutralized, destroyed, or expelled from the system.

If the ague has not continued so long as to have produced any considerable changes in the nerves or in any other part of the organism, the physician may at once resort to such measures as science has established for removing the miasm, the same as he would at once endeavor to remove any other poison. If the digestive organs are so deranged that the antagonistic medicine cannot readily be introduced into the system, emetics or cathartics may preceed the specific treatment. If the nerves are deeply implicated, such complication must not be lost sight of, but attended to by the use of proper remedial measures.

Almost invariably the disease has already produced considerable derangement of the digestive organs with constipation before the aid of a physician is sought; and in order that the specific medicine that is directed against the miasm shall have an opportunity to act freely, it is desirable to act upon the stomach and liver and intestines to rouse them from the partial torpor the disease has produced in them. A somewhat brisk cathartic, where the cathartic medicine is combined with other agents that act on the stomach and liver, given at the very commencement of treatment seems at times greatly to expedite the cure.

A pill or powder composed of one fourth of a grain of podophyllin, one grain of capsicum, and one grain of ipecacuanha, given on going to bed at night, will almost always answer. It may need to be repeated once in three or four days during the treatment.

- In the morning the patient should have some preparation of sinchona bark, either the sulphate of quinia, sulphate of cinchonia, quinidia, or the fluid extract of the bark, and in such quantities as shall make a marked impression upon the system. It is quite common to combine with the antimiasmatic some permanent stimulant, as ginger, capsicum, black pepper, or piperine; and when thus combined, the antimiasmatic seems to be decidedly more efficacious than when administered alone.
- The peculiar condition of the patient during the different stages of the paroxyem will require a particular management for the relief of the various symptoms then present; but the antagonistic treatment for the expulsion or destruction of the materies morbined not have as much regard to the condition of the patient as far as the paroxysm is concerned, as has been supposed by some. Only the digestive organs need to be rendered active as a preparation to the specific treatment, and even that is not always necessary.
- While the patient is in the stage of chill, but little can be done; but the recurrence of a chill can often be prevented by placing the feet in hot water just before the period for it to appear; giving him an emetic of ipecacuanha or of lobelia, or a combination of the two, with plenty of hot ginger or what is known as composition tea; and as soon as the emetic has operated freely, placing the patient in bed well covered, and administering to him a rather full dose of landanum and tincture of capsicum.
- If the chill has not been prevented, hot drinks that usually promote perspiration, external application of warmth or stimulating washes, with friction, especially over the spine, hot flannels or bricks to the feet, or the application of hot vapor or hot air to his surface under the clothing as he lies in bed, will not only shorten the cold stage, but protect the internal organs from the congestion liable to be produced by the ague fit.
- When the hot stage of the paroxysm commences, the clothing should be removed, the drinks should be small in quantity and cool, the extremities and spine may be bathed in tepid water, and evaporation promoted by the use of a fan, continued as long as the patient remains hot, but no internal medicine and but little nursing is required.
- . When sweating occurs, perspiration may be encouraged by

warm aromatic infusions, or hot gruel or hot broth, and the patient kept in bed for a time; then the surface may be wiped with a cloth wet with salt and water in which there is some alcohol, and dry clothing must take the place of that rendered damp by perspiration, and the patient encouraged to get up.

It should even be borne in mind that great harm has frequently resulted from attempting to do too much during the paroxysm of

Intermittent Fever.

Along with the specific treatment applied for the purpose of freeing the system of the miasm that produces the disease, there are certain measures that need to be adopted in this disease as well as in other forms of fever that demand the brief mention here given. It is true that the febrile excitement is seldom great except during the hot stage; but arterial sedatives, and especially the tincture of gelseminum, have been found so useful in controlling that, and in preventing congestion and induration of the spleen, or ague cake, as to deserve special mention.

The food must be easy of digestion, light, and nutritious; exposure, especially to the night air, must be studiously avoided; and all severe physical, mental or moral impressions must be carefully guarded against, as they are quite liable to produce a return of the disease even after it has apparently been subdued.

The specific treatment of this disease demands more than a brief notice, and therefore I have referred to other and less important matters first. Cinchona bark, and its preparations, has an established reputation that each succeeding year confirms, and, but that its salts are expensive, the profession would seldom care to look for a substitute. Sulphate of quinia is the preparation most in use, and after the preparatory cathartic has been administered it may be given to the extent of from thirty to sixty grains in the twenty-four hours, in any convenient form, and in doses repeated once in four, six, or eight hours, as seems most convenient. It is not necessary to pay any particular attention to the paroxysm, except that if the chill or the hot stage is severe the patient will not like to take a dose of quinia at that time. It may be given in pills, in powders, or in solution, and however it is given, one or more grains of capsicum in conjunction with each dose appears to aid its action.

A convenient solution is made by dissolving the quinia in aromatic sulphuric acid, five drops of the acid to each grain of the salt, and the solution combined with sufficient syrup of orangepeel, or of simple syrup, to make a draught. In solution is the most efficacious form in which to give this medicine.

Sulphate of cinchonia, being loss expensive than sulphate of quinia, has been substituted for that salt, and experience has appeared to prove it to be but little if any inferior to it in efficacy. It may be given in the same manner as quinia, but perhaps in alightly increased doses. The Homocopathic practitioners give this salt the preference.

Quinidia, or amorphous quinia is still cheaper than the salts already mentioned, and those who have given it a fair and full trial, have been strong advocates for its use. Where the paroxysms are somewhat irregular in their return, or recur at intervals of two or more days, many have supposed quinidia to be superior to either cinchonia or quinia. One fourth or one third larger doses of this than of quinia seem to be needed.

Other agents have been very strongly commended as specifics against miasm, some of which will be briefly mentioned, and others omitted for want of space, and because, also, those mentioned will almost invariably, if properly administered, be found to produce satisfactory results.

Phloridzine, or phloridzic acid, prepared by steeping the bark of the root of the apple-tree in warm dilute alcohol, from which it precipitates on cooling,—has been supposed to be nearly if not quite as powerful an antimiasmatic as quinia. It may be given in doses of from five to twenty grains three or four times a day.

Beeberina and its sulphate are used in India, but has not been tried often in this country.

Common table salt, without any doubt possesses decided antimiasmatic properties; but the dose is so large and the difficulty of taking it in sufficient quantities so great that probably it will never come into general use.

The web of the black spider has been supposed to possess very decided antimiasmatic properties rendering it of decided efficacy in this and other forms of miasmatic fever.

The bark of the horse-chestnut was so much used during the

wars of Napoleon, when cinchens bark could not be had, that the officinal powder of the Prussian Pharmacopœia was in great repute. It is made as follows:—

R. Horse-chestnut bark,
Willow bark,
Red Gentian root,
Sweet-flag root,
Cloves, §§ 3jj. Mix, and pulverize.

Hufeland considered this powder nearly equal to cinchona bark. The Ferrocyanuret of iron has also quite a reputation as an anti-miasmatic. Stokes and other European writers have supposed it to be nearly equal to quinia. Condie thinks favorably of it. Morrow used it very freely, but in combination with quinia. The dose is from three to six grains three or four times a day.

But merely stopping the paroxysms of Intermittent is not restoring the health of the patient. Antimiasmatic medicines are not agreeable to take, and patients are quite willing to quit using them as soon as the "ague is broken." The only safe course is to continue the antimiasmatic treatment for ten days or a fortnight after paroxysms have ceased to recur, and gradually diminishing the size or the frequency of the doses until the system is allowed to act without such aid.

The patient who has had ague should make use of aromatics and tonics, perhaps for months after the disappearance of the discesse, certainly as long as he is in any way subject to the originating cause of the disease,—both to restore the organism to a normal healthy activity, and as a prophylactic is against its return. This is a matter that cannot be neglected with safety.

By way of prophylaxis, also, some preparation of cinchons bark should be taken daily by all who live in, or have occasion to visit those regions that are known or are suspected to be miasmatic. By means of this precaution the ships of the British navy are enabled to remain months on the sickly coasts of Africa. Dr. Livingstone and his party, under the protective power of quinia has explored that continent; and all who have tested the matter have concluded that the prophylactic power of quinia, over miasm, is every way equal to its curative properties in ague and other diseases of miasmatic origin.

UTERINE HEMORRHAGE.—GALVANISM.

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BY O. H. CLEAVELAND, M. D.

It is well known to the profession that a loss of blood from the uterus, whether in the gravid or in the non-pregnant state, is always an indication of a grave lesion of the reproductive organs; and that it frequently is attended with great and immediate danger, from the profuseness of the flow as well as from the immediate increase of the diseased action which causes the flooding.

Menorrhagia may attack females at any period of their lives, but it seldom is met with except in those who have arrived at puberty, and is more apt to occur in those who have already ceased or are about to cease to menstruate.

By many this trouble has been spoken of and treated as a discase by itself, but flooding from the unimpregnated uterus reserver occurs except as a symptom of some change in the uterus itself, or of the ovaries; and therefore, to cure the disease, the treatment must be such as to remove the primary cause, and to restore the diseased organ to a state of health.

- Plooding from the uterus may be produced by a polypus within the cavity of that organ, or attached to the neck; by a cauliflower excrescence; by a corroding ulcer, either of the cervix or of the body of the uterus; by an displacement of that organ; or by a slight erosion or rupture of the surface of the uterus, when it is in a state of congestion from inflammation;—or it may continue from a want of vitality in the organ, as is the case usually in those patients who have passed the turn of life and are quite worn down and exhausted from great and protracted loss of blood.
- Such are the more common causes of uterine hemorrhage while the organ is in an unimpregnated state; and the nature of the causes which produce this loss of the vital fluid, as well as the seat of the disease, have, as has been remarked, contributed to make this flow one of anxiety and doubt to the physician, and also one that the usual prescribed methods of treatment too often fail of curing.
- · Of those eases of bleeding from the uterus which are caused by or complicated with the state of pregnancy or labor, it is not

necessary to specify the causes which may produce them; it is sufficient for present purposes to say that they are even moral perplexing and more immediately fatal than those first referred to. Neither is it deemed necessary to refer to the ordinary treatment of these disturbances further than that the entire profession unite in admitting the frequent futility of the usual treatment; whether applied to the general system or locally to the organ that is diseased, and to earnestly desire some more efficacious and many ageable method of controlling this formidable complaint.

About twenty years since the attention of the profession was turned to galvanism, as an agent that might possess the power of controlling and curing those diseases that produced hemorrhage from these organs; and Dr. Ramsbotham, in his lectures which were published in the Medical Gazette for April, 1834, claimed priority in recommending electro-magnetism in cases of atterine hemorrhage, as it had been used by Dr. Radford, of Manchester, England.

In Dr. Ramsbotham's great work "On the Principles and Practice of Obstetric Medicine and Surgery," 1st American edition, page 169, he says: "I am inclined to think that electric shocks, particularly derived from the galvanic battery, would exitte the flagging powers of the uterus under labor, and perhaps even induce action ab initio. This is a means, however, of which I would not, in the present state of our knowledge, recommend a trial; and I only judge by analogy, in consideration of the influence the electric fluid exerts over the nervous system generally and through that syst em over the muscular fibre."

It would seem that the profession were not disposed to act with the extreme caution advised by Dr. Ramsbotham, for soon we find several notices of the application of galvanism in labor; and in the Prov. Medical Journal for September 18, 1844, Dr. Radford, of Manchester, published a paper in which he said: "I have, therefore, in this short communication, suggested the application of a most important remedial agent, capable, as far as I am able at the present time to state, of rousing the subdued energies of the uterus, and thus bringing into operation that power which can alone secure the woman from further loss. I mean the contraction of the organ. The remedy I allude to is galvanism."

Again, in the same Journal, in December of the same year; Dr. Radford published a learned lecture on the same subject, from which I make the following extracts:—

"It is not my intention, on the present occasion to enter into so full consideration of the subject, but more particularly to confine my remarks to that condition which is the result of profuse and long continued bleeding, viz. exhaustion, a state highly interesting to the obstetrician, and which seems to require more than the recognized means for its management. When the principles of practice are unsettled in a case so important, it is very desirable that we should endeavor to discover some new method that shall place the question beyond dispute. We must solely trust, for the suppression of these large discharges of the blood to that most important agent, contraction of the uterus.

"The ordinary means of producing uterine contraction are so well known that I need merely to refer to them before the present audience. We have the bandage, grasping pressure, secale cornutum, the application of cold; and in the after hemorrhages, the introduction of the hand into the uterine cavity. But all these means may fail in producing this desirable change, and will fail, and do fail in extreme cases.

. "I can tell you most seriously and solemnly, that it (galvanism,) produces the two important changes upon the uterus in such a degree as in any previous reflections upon the subject I had no conception of.

"The ultimate contraction excited by this agent is analogous to and as powerful as that which is observed in normal labor, and the tonic contraction is greater."

He also stated that from the remarks of Dr. Apjohn in the Cyclopædia of Practical Medicine, he was led to suppose that galvanism aided in suppressing hemorrhage, also, from its power of producing coagulation of the blood in the mouths of the vessels. He continued:—

"In order to insure contraction, we must have recourse to galvanism. My remarks have hitherto been confined to the treatment of those cases of hemorrhage that are attended with exhaustion from delivery; but there are other cases in which galvanism is generally applicable. I consider that this power would be as useful in some hemorrhages of the early months of preginancy. In hour-glass contraction, and other forms of irregular uterine action after delivery I anticipated great benefit from its use. I am satisfied from positive trial of the remedy that it will be found a most important agent in tedious labor depending on a want of power in the uterus, and when no mechanical obstacle exists. I also would suggest the probability of its proving valuable, in originating uterine action, de novo, in cases where it may be considered necessary to induce premature labor.

"It seems to me, also, to be worthy of a trial in certain cases of menorrhagia in the ungravid state, where, on vaginal examination the uterus is found to be atonic, as evidenced by its large flaccid condition, and the patulous state of the os uteri."

Dr. Radford's suggestion to apply galvanism for the purpose of suppressing uterine hemorrhage in the non-pregnant uterus aid not long remain untried; and soon there were quite a number of eminent practitioners ready to bear testimony to the utility and value of the remedy.

Dr. Thomas Dorrington, of Manchester, read a paper to the Manchester Medical Society that was published in the Prov. Medical and Surgical Journal for March 11, 1846, in which he stated his belief that it is one of the most valuable additions that has been made to our obstetrical armature in modern times. He gave cases of its application that are most favorable to its use.

Dr. Johnson, of Salop Infirmary, also reported a case in the same Journal for the 25th of March, equally favorable to this agent.

H. Wilson, Esq. of Runcorn, also, in the same Journal for April 25th of the same year, describes a case of deep interest where this method of treatment was very satisfactory.

In the Medical Times for August 12, 1848, Dr. Tracey E. Waller says: Galvanism may be employed, no doubt, with success and perfect safety, in all passive forms of uterine hemorrhage.

Dr. W. F. Channing, in his work, says:—Where this exists, (speaking of uterine hemorrhage,) of a passive character, from vescular inertia, or diseased condition of the tissues, electricity may be with confidence employed, though with discretion, in

current may be sent through the organ. The power of electricity in producing organic contractility would be of use here.

Dr. Bird's work contains a letter from Dr. John Dempsey, in which that writer states that he then had used galvanism in twenty cases, in ten of which there was loss of blood from the uterus; and from that number of observations Dr. Dempsey expressed himself highly pleased with the remedy, as more successful than any other known agent.

In a paper published in the London Lancet for January, 1854, Dr. Robert Barnes, of London, detailing the use of galvanism in some cases of labor, stated, in regard to a patient recently confined under the care of Dr. Keogh, that he had learned that great apprehensions were felt in regard to the recurrence of hemorrhage from the uterus remaining uncontracted. Galvanism applied steadily for half an hour caused the uterus to contract, and the expulsion of two coadgula. The next day the galvanic current was again applied, and the uterus made to contract still more; and several physicians concurred in expressing their entire satisfaction in regard to the action of this agent.

A vast amount of other equally strong testimony is recorded in regard to the power of galvanism to arrest the flow of blood from the uterus, but more frequently in cases of flooding after labor; and in all these cases, except in immediate connection with labor, the writers recommend a mild, but full and continued stream of galvanism. But, strangely, neither the work of Dr. J. Althaus, published last year in London, on *Medical Electricity*, nor the more pretending one recently published in Boston, from the pen of Dr. A. C. Garratt, make any clear and distinct allusion to the great value in uterine hemorrhage, much less give any reliable directions as to its application and use.

In cases of non-contraction of the uterus, after labor, it may be well to pass the stream interruptedly, so as to give a sudden impulse to the uterus, still making use of galvanism of low tension so as not to endanger disorganization of any organ; but in other cases, or those in which there is a loss of blood, not connected with, or immediately following labor, the uterus does

not need to be made to contract to constringe the blood-vessels, and there can be no doubt that a *milder* application of galvanism, that shall be continued for such a length of time as shall be necessary to *establish* a tonic and healthy activity of the organ.

When it is considered that very many females suffer from an undue loss of blood from the uterus, either during the time of menstruation or preceding, or following the time of the appearance of the menses, as well as at the time of life when the periods usually cease; and when the danger from a sudden and free loss of blood, as well as from a more protracted drain, and also from the various derangements of the system that follow, as the direct sequence of this drain—are all but slightly under the control of the ordinary remedies,—the profession will hail with joy any means that may be presented to them which shall relieve them of the embarrassment they have heretofore labored under in the treatment of these affections, or be instrumental in the cure of this most interesting class of patients.

Galvanism, as has been shown, is not an untried agent, and it is mentioned as a valuable auxillary in the treatment of these diseases, not because it is new, or for the purpose of presenting a novelty to the profession, but because, owing to the construction of the machines most commonly in use not answering the expectations of physicians, it has been allowed to fall into disrepute; when with better machines or a more intimate acquaintance with the construction of those at present sold and used, the profession will find in galvanism the most efficient agent at present known for controlling loss of blood from this organ.

The combined experience of those scientific practitioners whose opinions have been quoted, indicates that a mild, yet as full a stream as may be required, should be made to pass continuously through the pelvis from the sacrum to the pubis, until there is sufficient vital activity and energy imparted to the pelvic organs and to the veins of the uterus, to insure proper tonicity and contraction. By this means, the disordered action can be checked and the flooding controlled by the physician with as much certainty as the muscles of the arm are made to contract by the same agent.

If we take the whole of his report, we will find that about 35 per cent. of the parents are reported defective, and 28 per cent. of the offspring in that condition; showing that the ratio of defective offspring among all of his Classes is about the same that we have shown it to be in Class E.—That a larger proportion of the parents were defective than of the children, and that if any result has ensued from this system of intermarriage, it has been sanitary rather than otherwise.

Referring again to the table of Classes as Dr. Bemiss presents them, and applying to them the same rules of examination and analysis that we did to Class E., we find that Classes A. B. and G., present a larger per cent. of defective offspring than Class E., whilst all the others present a less proportion; and that the ratio between parents and offspring remains about the same throughout all the Classes.

The only circumstance which seems to change that proportion, is that of intemperance in the parents, in which it increases to 60 per cent. of the entire number of children born to parents reported intemperate. What number of these parents were the descendants of parties themselves defective; and to what extent atavism has prevailed and affected offspring in the second, third, or even tenth generation, Dr. Bemiss does not inform us; and in fact he quite ignores the idea that such a condition as the hereditary transmission of qualities good or bad, is known, or believed to be possible. Quite as good authority as Dr. Bemiss, states that nine-tenths of all constitutional defectiveness, physical or mental. is owing to some hereditary taint. Esquirol, Earle, and a dozen others are among the number who fully subscribe to this view. No one who has any regard for his reputation as a medical man or a philosopher, now questions that doctrine. Dr. Bemiss' tables show that intemperance has been an active agent in mul-* tiplying and intensifying, if not absolutely producing physical and mental defectiveness.

Dr. Bemiss does not inform us how many of the cases reported deaf, blind, scrofulous, insane, epileptic, and any amount of other ailments, mentioned and not mentioned, may have resulted from scarletina, measles, and a hundred other accidents of life, independent of consangunuity. All know that these accidents do

sometimes occur, and yet not one such is mentioned in all of the Dr.'s cases, numbering 3.942. This is very curious, and is only equaled by his report of 125 families not related by blood, who had 837 children, 18 of whom were defective. Truly Dr. B., and his reporters must have lived in a community of unexampled physical health, virtue, and sound mental condition,—found perhaps, no where else than in Louisville, Ky., and Keokuk, Iowa.

If Dr. Bemiss or any one else will take a whole County or State, ascertain all of the cases of intermarriage of blood relalations, and then obtain the history of each family on both sides as far back as possible, and enquire into the health and habits of their ancestry,—observe all accidents or diseases which may have been connected with each one,—if any diseases have been peculiar to any family, and what were their position in society and manner of living;—and in short let him enquire into everything that could goes to make the character and history of the families:—then we will have a report of undoubted value, and one that will reflect credit upon its author. The present one is almost useless, being wholly deficient in its essential parts. It displays an amount of ignorance, unfairness, or dishonesty, which we were unprepared to see in such a document, and are greatly surprised at its endorsement, without question by the Association.

BOOKS, PAMPHLETS, ETC.

Within the past few years, several works new and old, have been published both in Cincinnati and other parts of the country, for the ostensible purpose of teaching the people how to manage the sick without the aid of a physician. The most recent work of this kind published in this city is *The People's Physician*, designed as a Manual of Medicine, expressly for the use of families and individuals; by L. P. Meader.

Without being bound to the dicta of leaders of party or ism, the author has been enabled in this book to give a clear, concise, and sufficiently minute expression of the course, in the estimation of the writer, necessary to pursue in the treatment of the more common forms of disease. As a specimen of typography, the work is quite satisfactory, being printed with clear type on good paper, with a fair sized page and ample margin. It compares quite favorably with works of its class.

The Transactions of the Medical Society of the State of New York for 1859, have been somewhat tardy in coming, but the volume contains matter of sufficient value to demand a notice even at this late day.

In addition to the usual matters found in volumes of Transactions, it contains a very valuable paper from Prof. Hamilton in regard to Fractures of the Neck of the Femur, with reference to the question of ossific union; a paper on the treatment of Fractures of the Femur, by simple extension, by Dr. Swinburne, of Albany; one on Partial Dislocations; and other valuable Surgical papers. It also has a Prize Essay on Scarlet Fever by Dr. Carrington; various Papers and Reports of Committees, and an abstract History of the Society from whom the book emenated. Like its predecessors, this volume is very good.

The Second volume of The Physiology of Common Life, by Geo. H. Lewes, published by D. Appleton & Co. of New York, and presented by Rickey, Mallory & Co. of Cincinnati, was noticed last month. The first volume, since received, is actually of more interest than the second. As a whole, it is a work of rare merit and great value.

Several years since, Harland Coultas, of Philadelphia, published a work on Cryptogamic Plants, which was followed five years since by one on the Plant as an illustration of the Organic Life of the Animals. Now, D. Appleton & Co., of New York, have published another, which has reached me through Rickey, Mallory & Co., on What may be Learned from a Tree, in which is written a life-history of a tree, from the first manifestations of vitality in the generating seed, until its period of puberty when it puts forth flowers and perfects its fruit. It is a very interesting book.

Dr. J. S. Wilson, of Columbus, Ga., Editor of the Health Department of the Lady's Book, has had published by J. B Lippencott & Co., of Philadelphia, a Home Book of Health for

Mothers and Families. It is well written, admirably arranged, and must prove useful to those for whom it was published. It was sent through the house of Robert Clarke & Co., of Cincinnati.

One of the most singular and unique publications of the present season, is from the pen of Dr. Geo. H. Taylor, of New York, and published by Fowlers & Wells, an Exposition of the Swedish Movement Cure.

Early in the present century, Peter Henry Ling, who had passed his Theological examinations at Smaland, in 1797, and had traveled in Germany, France and England, and had mastered the art of fencing at Stockholm,—was appointed Professor of Fencing at Lund, where he soon attracted the attention of the people of that and the neighboring towns. In 1805, he studied Anatomy, Physiology, and other branches of the natural sciences; but particularly as the basis of a true system of gymnastics, not only for the perfection and development of the body in health, but to serve as a remedy for the removal of disease.

The first opportunity he had of putting his ideas to a public test was at Stockholm, in 1813, where he had been appointed Founder and Director of a Royal Institution for that purpose. In 1814, his ideas as presented to the King of Sweden were approved and received the legal sanction of a royal ordinance. For twenty years he labored with great zeal and dilligence, and in 1834, he was made Professor and had awarded to him the Knighthood of the Order of the North Star; and finally his system of gymnastics was incorporated as an element in the course of Public Instruction, not only in the Military Academies, but into all Town Schools, Colleges, and Universities, and finally into the Orphan Asylums, and all the country schools.

In this work, Dr. Taylor, who visited Sweeden to obtain a thorough knowledge of Dr. Ling's method, has presented the results of his investigations, and particularly in regard to the value and the peculiar form of movement in the cure of various forms of disease. Without any doubt it will attract a large share of public attention, and deserves to be carefully studied by physicians.

Lindsay & Blakiston of Philadelphia, who published the first Physician's Visiting List and Diary, have already issued theirs for 1861. It contains an Almanac, a Table of Poisons and their Antidotes, a Table for calculating the period of Utero-Gestation, Marshall Hall's Ready Method in Asphyxia, a complete Visiting List, pages for Obstetric engagements, for Vaccination engagements, for Addresses of Patients and others, for Nurses' Addresses, for Bills and Accounts asked for, Memorandum of Wants, and General Memoranda. It is designed for the pocket, and very convenient.

The advanced sheets of De Bow's Review, which have been sent us, contain a unique paper from the pen of Dr. S. A. Cartwright, of New Orleans, endeavoring to show that Hebrew Bible disproves that the blacks and whites were of the same origin.

Speaking of Adam Clarke and his Commentaries, Dr. Cartwright says:—"If he had lived in Louisiana instead of England, he would have recognized the negro gardener. Eve was a new comer, and had evidently been questioning, out of curiosity, the gardener about the tree with the forbidden fruit," etc. The paper is in the peculiar vein of the champion of Mrs. Willard's theory of respiration and circulation.

Dr. J. Dickson Bruns, of Charleston, has sent his Anniversary Oration on *The Claims and Position of Physiology*, which I have read with unusual interest. This is far above the average of such productions.

A pamphlet containing a reprint of an article in the Southern Medical and Surgical Journal, from the pen of Dr. H. F. Campbell, on *Caffeine as an Antidote to Opium*, sent by the author, is worthy of a wide circulation and careful perusal.

A pamphlet on the Effects of Disease on the Teeth, by Dr. A. Robinson, of Wheeling, Va., contains interesting matter, and valuable suggestions.

I have so frequently and so heartily commended Ranking's Half-Yearly Abstract, that I now will only announce the reception of No. 31, for July, and state that it fully sustains its former reputation. It is published by Lindsay & Blakiston, of Philadelphia, at \$2,00 a year.

The American Journal of Dental Sciences, for July, also published by Lindsay & Blakiston, is filled with matter of interest to Dentists and Physicians.

The British and Foreign Medico-Chirurgical Review, for July, published by S. S. & W. Wood, of New York, contains an unusual amount of interesting matter taken from American publications.

The London Lancet, for August, has not yet been examined.

The Charleston Medical Journal, for July, has a very valuable paper on Quinia, as a Prophylactic for Intermittent and Remittent Fevers, from Dr. H. W. Saussure.

Malum Egypticum, is the subject of two pamphlets sent by Dr. S. A. Cartwright, of New Orleans, giving the history, nature and treatment of one form of the disease recently known under the general title of Diphtheria. These articles first appeared last year in the N. O. Medical and Surgical Journal, and are well worth careful study.

Prof. J. N. McDowell's Report of Improvements in Surgery for the Last Fifty Years, read before the American Medical Association at New Haven in June last, and now issued in a pamphlet, is an extremely interesting as well as hopeful production. Its brevity must have been a source of care to its author, as well as one of regret to the readers.

The North American Journal of Homeopathy, for August, contains its usual variety of interesting articles. Its conductors are laborious, earnest, and honest men, or the pages of this periodical are not a good index to their character.

A work designed for the people and the profession, styled A brief and intelligent view of the Nature, Origin, and Cure of Tubercular or Scrofulous Disease, written by Dr. John Fonda, has been published by W. C. & J. W. Neff, of Philadelphia, and is sold in connection with their Galvano-Electrical machines. It is written in a familiar colloquial style, which has been adopted by some authors, but appears too low for the discussion of grand scientific matters.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

As will be seen, the Aromatic Sulphuric Acid is stronger than the Diluted Sulphuric Acid, and both of them are too strong to be administered undiluted. The dose of either mixture is from ten to thirty drops, in a wine-glassful of sweetened water, repeated three or four times a day. The mouth should be carefully rinsed out with water after each dose is taken.

The Aromatic Sulphuric Acid is often made use of as a vehicle for the administration of the sulphate of quinia, whose bitter taste it covers in part, and whose medicinal power it is supposed to increase. It is also used in making the various *Infusions of*

Cinchona, which see.

ACID, SULPHUROUS. Sulphurous Acid. This occurs in three forms. Gaseous, Liquid, and Solid. Stahl, Scheele, and Priestly submitted the gaseous form of Sulphurous Acid, under the name of Phlogisticated Sulphuric Acid, to an accurate examination. It is the form in which it escapes, frequently along with watery vapor from the earth near volcanoes. It is the form in which sulphur is frequently applied to the surface in sulphur furmigations. Homer mentioned its being used in medicine thus. Fumigations with Sulphurous Acid gas are used at the presen ttime for various skin diseases. Geber, in 1659, spoke highly of them under the name of balnea sulphurosa, for the cure of the itch. Under the same name of sulphur baths, they are in use both in public hospitals and in private practice, in nearly all large cities. Perhaps at the Hôpital St. Louis, Paris, the apparatus in use is as convenient as any. D'Arcet, by whom it was erected, applied sulphurous acid to a large variety of skin diseases.

D'Arcet had constructed a box which encloses the entire person with the exception of the head, with an arrangement of an oil-cloth curtain drawn around the neck to prevent the fumes from escaping, while sulphur is placed in the lower part of the box in a shallow iron cup, and the cup heated with a spirit lamp until the sulphur ignites, when it unites with the oxygen of the atmosphere and assumes the gaseous form, filling the entire bath box

with its fumes.

Rayer says that Sulphurous Acid fumigations are far preferable to other hospital methods for the cure of the itch, as their expense is but trifling, they leave no unpleasant smell, and do not soil the linen. But it takes quite a number of applications to cure the disease.

This bath has also been used in chronic eczema, lepra, psoriasis, impetigo, and pityriasis. It is probable that this form of bath can be made more useful than it has heretofore been.

Sulphurous Acid Gas dissolves itself largely in water, and in

such solution it has proved useful as a wash in the various diseases

of the skin to which the fumes have proved beneficial.

The vapor of burning sulphur, which is sulphurous acid gas, has been inhaled for the cure of eczema, and as a *Stimulant* in syncope and asphyxia. For these purposes it has been specially recommended by Nyston. For these purposes a ready application can be made by burning a sulphur match near the nose.

Antidote. When a person has inhaled too much of this gas, the vapor of ammonia may be cautiously inhaled. A few drops of aqua ammonia, freely diluted, may also be given internally.

Liquid Sulphurous acid is obtained by subjecting the gaseous

acid to the combined influence of pressure and cold.

Solid Sulphurous Acid is prepared by heating it to 105° F.

when it becomes cystalline, transparent, and colorless.

ACID, SYLVIO. Sylvic Acid. One of the four acids found in the turpentine resins. See *Resin*.

Acm, Tanaceric. Tanacetic Acid. An acid found in the

Tanacetum vulgare, or common Tansy.

Acm, Tannic. Tannic Acid. Tannin. Gallotannic Acid. Prepared by placing powdered nut-galls in a percolator and filling the percolator with washed sulphuric ether, covering the top of the percolator to prevent evaporation of the ether, and fitting a receiver to the lower end to receive the liquid as it passes through the powdered galls. The liquid soon separates into two unequal portions, the lower one being the lesser in quantity and more dense.

The upper liquid is then separated from the lower, which is put into a capsule and evaporated to dryness with moderate heat. For the therapeutical uses of Tannic acid, See Astringents, and

Tannic Acid.

Acm, Tartaric. Tartaric Acid. Acid of Tartar. Crystalized Acid of Tartar. This acid exists in the free state in tamarinds, grapes, pine-apples, and pepper. In combination with potassa and lime it is found in other fruits. It is usually prepared from the Bitartrate of Potassa by dissolving the bitartrate of potassa in boiling water, adding prepared chalk to form the Tartrate of Lime, and then adding sulphuric acid to combine with the lime, setting the Tartaric Acid free dissolved in the water, which may be evaporated by a gentle heat, when the tartaric acid will form in crystals. The crystals may be dissolved two or three times, and evaporated, to render them quite pure.

When Tartaric acid is carelessly prepared it may contain some

sulphuric acid, or muriatic acid, or oxalic acid.

There have been distinguished six distinct varieties of Tartaric Acid, viz: Destotartario acid; Paratartario, or Urio, or

Racemic acid; Lavatartaric acid; Inactive tartaric acid; Metatartaric acid; and Isotartaric or Tartralic acid. Although these varieties are of interest to the scientist, therapeutically they

do not appear to possess any peculiar value.

Tartaric acid has been used to a considerable extent in medicine, and in small doses it produces the usual affects of the Order of medicines to which it belongs. (See Acids). It reduces heat, diminishes vascular action, and allays thirst; it also checks perspiration, and the secretion of bile; while it probably slightly increases the amount of urine excreted, as well as produces a gentle increase of action in the bowels.

Its continued use produces a hurtful, suppression of the bile and of the perspiration; with almost certain, and often unmanagable irritation of all of the digestive organs. In large doses it so rapidly parts with its oxygen that it proves an active local irritant, disturbing the stomach and intestine; causing distress, diarrhoea, and

perhaps vomiting like that of cholera morbus.

One ounce of tartaric acid dissolved in half a pint of hot water produced violent inflammation of the alimentary canal, and death in nine days. I have no doubt that many of the cases called cholera, and a large number of the cases of diarrhea among children, are caused by the tartaric acid of the so-called lemonade that is sold in the streets of the cities in summer.

Tartaric Acid is quite frequently used in the formation of the acidulous effervescing drinks that are so pleasant in febrile and inflammatory diseases; but it is never equal in value even for that purpose, to citric acid, and should never be used if citric

acid or lemon juice can be obtained.

When Tartaric Acid is subjected to distillation, the product is, Carbonic Acid, Water, a crystalline acid called *Pyrotartaric Acid*, and an oily acid called *Pyruvic Acid*. See *Tartaric Acid*.

ACID TARTRALIO. Tartralic acid. Prepared by fusing by heat the crystals of Tartaric Acid, until they have lost one fourth of their water of crystalization.

Tartralic Acid differs from Tartaric acid, the same as Pyro-

phosphoric acid differs from Phosphoric acid.

ACID, TARTRELIO. Tartrelic Acid. Prepared by heating tartralic acid until it has lost one third of its water of crystalization, or until it contains one-half as much water as the crystals of tartaric acid contain. This acid bears the same relation to tartaric acid that metaphosphoric acid does to phosphoric acid.

Acid, Taurocholeic Acid. Sulphocholeic Acid. Prepared by precipitating fresh ox-gall with sugar of lead, filtering, precipitating the filtrate with a little subacetate of lead, and decomposing the precipitate with sulphuretted hydrogen, and then present the filtrate to a thick present fluid.

then evaporating the filtrate to a thick syrupy fluid.

Acm, Ulmic Acid. Ulmin. Obtained in the natural form by taking a mucillaginous matter from the elm and other trees, and drying it to a brown substance.

Formed artificially by heating a piece of wood with potassa;

or by the action of sulphuric acid on vegetable matter.

Acm, URIC. Uric Acid. One of the substances excreted from the body in the urine. The amount of uric acid in urine may be determined by precipitating it by adding an acid to the urine. When there is no albumen in the urine, muriatic acid will answer, but when albumen is present, phosphoric acid should be used.

Uric Acid has a strong tendency to form salts with the alkalies of the blood or urine, as urate of lime, urate of ammonia, urate of potassa, or urate of soda. When uric acid unites with soda in the blood to form urate of soda, and that becomes deposited in the capillaries of the smaller joints, and around and in the tendons of the extremeties, it produces that form of disease called Gout.

Acm, Uvic. Uvic Acid. Paratartaric Acid. Racenic Acid. One of the acids that occur naturally in the cream of tartar from certain localites.

ACID, VALERIANIO. Valerianic Acid. By some considered to be identical with phocenic acid obtained from whale oil by Chevrenl.

Formerly it was obtained from the root of the Valerian officinalis, and the fruit of the Vibumum opulus, where it is supposed by some to exist in the uncombined form. It is also met with in the root of the Angelica archangelica, in the inner bark of the Sambueus piger in Assefetide, and other plants.

Sambucus niger, in Assafætida, and other plants.

When obtained from Valerian root, by most it is supposed to be the result of the oxydation of Varelol, one of the ingredients of the oil of valerian. Rabourdin acidulated water with sulphuric acid, steeped valerian root in the acidulated water, and distilled off 231 grains of Valerianic acid from 4² pounds of the root. By similar means Aschoff produced 18² drachms of valerianic acid

from 15 pounds of root.

Usually Valerianic acid is now made artificially by the decomposition of various amimal and vegetable substances, or from fusel oil, the oil of grain. Wittstein recommends to take 10 pounds of bicarbonate of potassa and 10 quarts of water, and to the mixture gradually add 10 pounds of sulphuric acid and 2 pounds of rectified fusel oil. Distill from this mixture 8 quarts of liquid, and mix what remains with six pounds more of sulphuric acid and again distill off the liquid. Mix the distillates, add carbonate of soda to saturation, remove the oil, and boil the

solution to drive any oil not removed. The fluid is then to be decomposed with either sulphuric or phosphoric acid, when the valerianic acid is separated nearly pure. Once rectifying will leave the acid quite pure, and a product of one pound concentrated valerianic acid.

Valerianic acid, uncombined, is not used in medicine, but in combination with ammonia, atropia, bismuth, iron, morphia, quinia, and zinc, it is quite commonly in use in modern practice. See *Valerian*, and the *Valerianates*.

ACID VAPOR. Carbonic Acid. Fixed Air. Aerial Acid.

Gas. Spiritus Lethalis. See Carbonic Acid.

Acid, Veratrico. Veratric Acid. An acid found by Merck in the seeds and stalks of the Asagræa officinalis, or Veratrum

officinale, or Sabadilla of the shops.

Acid, Virgineic. Virgineic Acid. An acid analagous to Valerianic, Phocenic, and Butyric acids, obtained from Senega root.

ACID VITRIOLATED TARTAR. Bisulphate of Potassa. ACID, VITRIOLIO. Oil of Vitriol, Sulphuric Acid.

Acid, Vulpinic. Vulpinic Acid. Obtained from Ervinia vulpina, and other of the tinctorial Lichens.

ACID, XANTHOTANNIC. Xanthotannic Acid. A peculiar acid,

discovered by Ferrein, in the bark of the Prickly Ash.

ACID, ZOOTIC. Prussic Acid. Hydrocyannic Acid, which see. ACIDA. An order of medicines, of the class *Hæmatica*, and of the Divisions *Restaurantia*, and *Dissolventia*. See *Acid*.

Acros. Among medicines there are many agents that are chemically acid which do not belong to the Order Acida. These agents are properly grouped together as they have properties in common, which properties indicate a similarity of chemical constitution.

Acids, Astringent. Among the Astringent group of acids are to be found the Boheatannic, Catechutannic, Catechuic, Cephaëlic, Cissotannic, Coffeotannic, Kinotannic, Moric, Moritannic, Pyrogallic, Quercotannic, Viridinic, and Xanthotannic acids.

Acids, Briter. Some of the bitter acids are poisonous. Among the Bitter Acids may be found Anacardic, Cahincic, Cetracic, Chrysophanic, Digitalic, Digitaleic, Hedric, Phloridzic, Picro-

toxic, Polygalic, and Santonic acids.

Acids, Fruit Acids. Acetic, Citric, Malic, Oxalic, Tartaric, and Uvic acids. As a secondary group, or acids obtained from Fruit acids, may be marked, Aconitic, Equisetic, Fumaric, Lactic, and Succinic acids.

Acids, Mineral. Among the mineral acids in frequent use as medicines, either by themselves, in combination, or as mixtures,

are Boracic, Carbonic, Chloro-hydrocyanic, Chromic, Hydrochloric, Hydrosulphuric, Hydriodic, Muriatic gaseous, Muriatic dilute, Nitric, Nitroso-Nitric, Nitric dilute, Nitro-muriatic, Sulphuric, Sulp

hydrocyanic, and Phosphoric dilute.

ACIDULO ALKALINE WATERS. Those Carbonated Waters where the carbonic acid in part is combined with soda so as to form carbonate or bicarbonate of soda, are so called. Among the more important of these natural acidulo-alkaline waters, are the Selters oftentimes mis-called Seltzer, the Alttvasser, the Saltzbrunn, the Reiners, and the Pyrmont waters. Frequently Iron is also met with in these waters.

Acidulous Waters. Carbonated Waters. Waters rendered acid by carbonic acid gas. There are many natural springs of this description. Nearly all springs and wells contain some carbonic acid gas in them, but the quantity is too small to give a decided acid taste to the water. To render the water decidedly acid, there must be from 25 to 50 cubic inches of the gas to each 100 cubic inches of water. The waters of Saint Nectaire are said to contain 400 cubic inches of carbonic acid gas to each 100 inches of water.

The Acidulous, or Carbonated waters have been divided into four classes, the Alkaline-muriatic, as the Selters; the Earthy-muriatic, as the Kissingen: the Earthy-alkaline, as the Salz-

brunn, and Ferruginous, as the Geilnan waters.

All these acidulous waters owe the medicinal value mainly to the carbonic acid gas which they contain, and the action of that gas on the stomach, the intestines, the nerves, and the kidneys. They are cooling, soothing, quieting, and quite often relieve the nausea produced by sub-acute or chronic inflammation of the digestive organs. (See Carbonic Acid.) They are quite transient in their effect on the system, but are very useful in some derangements of the organs of digestion, in disease of the liver, the kidneys, and the uterus. The Ferruginous-acdiulous waters serve to impart iron to the system; and the Acidulo-alkaline waters are of value to counteract the lithic acid diathesis, and to cure gout, chronic rheumatism, and other lithic diseases.

The Acidulous, or Carbonated waters are generally considered objectionable during the presence of active inflammation or fever.

and of plethora.

ACIDULOUS TARTRATE OF POTASSA. Cream of Tartar, which see. ACIPENSER. A genus of cartilaginous fish from which Russian and Siberian Isinglass is manufactured. See *Ichthyocolla*.

Acology. An old term used to denote remedial agencies; or in a more limited sense, surgical and mechanical remedies.

[To be Continued.]

EXTRACT OF ELDER BERRIES.—Take any quantity of fresh Elder Berries, put them in a pan on a stove or over a slow fire, and gradually heat and roast them with constant stirring for half an hour. Then press out the juice, let it settle, strain, and gradually evaporate until it becomes as thick as cream, when add one half as much honey as there is of the juice of the elder berries, and let it gradually harden to the consistency of an extract.

This is useful in coughs, colds, and diseases of the throat, airpassages, and lungs.

Syrup of Wild Cherries.—Bruise the cherries and their kernels together in an iron mortar so as to crush each cherrystone. Pour them into any convenient vessel and let them stand for three or four days, when the juice is to be pressed out and left until it has become quite clear and limpid. To every pint of this liquid add two pounds of honey.

It is useful in all diseases of the lungs, and kidneys, and incases of deranged menstruation with a tendency to consumption.

Dose one pill four or five times a day.

SEDATIVE PILLS.— A Camphor,
Opium,
Guaiacum āā.

Pulverize each ingredient separately, and then add them together without any gum, or anything else. These are especially valuable for rheumatic and aged persons.

Fraxinus Excelsion, (Common Ash).—The tincture of Ash bark has been used in gout, rheumatism, and ague. Its value in gout has been tested for half a century. As long ago as 1712 it was used in the place of cinchona bark, but in somewhat larger doses.

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REMITTENT FEVER.

BY THE EDITOR.

THERE are quite often met with, especially in the middle, southern, and south-western States, a form of fever that in many regards resembles Intermittent, but as there are not well marked periods of entire intermission, while there is a remission of the febrile symptoms, these fevers are styled Remittent. Like the Intermittent fevers, the Remittent are divisible into several varieties, among the most common of which is the variety usually denominated Simple Remittent Fever, but quite often known also as Bilious Fever, or Bilious Remittent Fever.

Simple Remittent Fever, with more or less marked derangement of the functions of the liver, constitutes the usual annual febrile epidemic of the South during the later part of the summer and autumn and perhaps lingering along into winter; caused, without any doubt, by a miasm generated by the decomposition of organic matter under a high heat, with the absence of the usual amount of moisture, and the action of the atmosphere. This form of disease has so many points of resemblance, in its origin, its symptoms, and treatment, to fever and ague, or Intermittent Fever, that by some it has been supposed to be but a more severe form of Intermittent. But in all cases, or in nearly all cases, the fever is complicated with an absence of the usual amount of bile in the intestines, while there is more than the usual amount of bile in the fluid circulating through the lymphat-The derangement of the liver is so commonly observed and so complicates the disease and its treatment, that this fever is not seldom called simply Bilious Fever.

A high degree of atmospheric temperature, considerably higher than is necessary for the production of agne, appears to be

absolutely necessary for the propogation of Remittent Fever; and the frequency as well as violence of the disease seems to be proportionate to the heat of the locality and the season; and hence the frequency with which it is met in the hotter portions of the country, and after the hottest season has passed. Even in the more northern portions of the country, when the summer has been unusually warm, cases of this form of fever are occasionally seen.

Although this disease varies greatly in its manifestations in different localities, and even in different patients of the same locality, there are certain characteristic symptoms by which it usually can readily be distinguished.

In the milder cases, usually for several days, the patient feels languid, listless, a loss of appetite, derangement of taste, with a sense of bitterness in the mouth, a sense of uneasiness and pressure as of congestion about the pit of the stomach, a sluggishness of the bowels, perhaps amounting to costiveness, and commonly a sense of heaviness and pain in the forehead over the eyes.

After a few days of a feeling of malaise, as above described, the patient will feel a slight chill like a mild and brief attack of ague, with coldness over the spine, usually not lasting more than an hour,—followed with a slight sense of heat over the entire surface, with a dry and rather constricted skin, a flushed face, red and suffused eyes, quick, irregular, and somewhat laborious breathing, and frequent but not tense pulse.

The prostration of strength which follows this febrile attack is very marked and out of proportion to the mildness of the paroxysm, and the patient becomes restless and wakeful. The pain in the head increases with a feeling of fullness, weight, and tenseness, as though the head was tightly embraced with an unyielding band. The pain is also felt down the spine, and in the extremeties, but more severely in the calves of the legs. The region of the liver and stomach is also often a seat of pain, and when not painful becomes tender to the touch.

The stomach quickly becomes irritable, with nausea and perhaps immediate vomiting of everything swallowed. Vomiting where the stomach has not had anything presented to it is a quite commom symptom, even on the day of the first paroxysm, but usually this spontaneous vomiting does not occur until the second third or day. The matter vomited is quite bitter, yellow, greenish, or green, and appears to be a vitiated bile.

Usually the tongue is decidedly moist, red but not a dark red at the sides and tip, but coated on top, and particularly towards the roots with a whitish brown or yellowish paste that becomes quite thick. There is more thirst than would at first be anticipated from the amount of fever and state of the tongue, but which is produced in part at least, from the coating of the tongue and throat preventing a free transmission of fluids to the veins. As has been said, the bowels are sluggish, and perhaps coative; and the urine is secreted in diminished quantities but of a high and brownish color. After the fever has continued some days the skin acquires a yellowish, but not a decidedly jaundiced hue, which may also be seen in the eyes.

After the chilly stage passes away, the fever will continue eight or ten or twelve hours, when it and the pain gradually abate, the skin may become moist, but not covered with a profuse perspiration, and the patient becomes drowsy, and perhaps he has a short sleep. If the skin does not become moist after the heat has passed away, the patient continues restless, uneasy, and wakeful, until the next paroxysm. The freedom from febrile symptoms, or the stage of remission varies in duration according to the violence of the attack. Generally this remission, never a perfect intermission, does not continue but from one to three hours; when all the phenomena of a paroxysm already described, will return, but perhaps in an agravated form.

Thus the disease proceeds from day to day. If the patient is growing worse the exascerbations are prolonged and the remissions more brief and less marked, and the disease assumes the inflamatory form often spoken of,—and finally it may by some be considered a case of continued fever. When the patient is improving, the paroxysm is lessened in severity and the remission prolonged, until finally the fever ceases entirely.

If the disease was very active at first, or when it has become come so after a few days, all the symptoms are manifested more markedly than here described; the skin during the paroxysm becomes very hot, the fever is more persistent, the eyes are more

suffused, and have a muddy brownish-yellow look, and become languid and dull; the pain, weight, and tension of the head are agravated, with strong aversion to light and sound, and, perhaps occasional delerium. The tongue becomes more covered with fur, and is dry, with severe thirst, with an almost insupportable oppression at the pit of the stomach, and perhaps tenderness of the abdomen; the breathing is more labored, rapid and irregular; the nausea and vomiting are quite constant, the fluid ejected being thick, ropy, tenacious, yellow, brownish, or green; the bowels are moved with difficulty, and discharge a watery fluid with much griping, or when acted on by medicines the dejections may be dark, slimy, and of a very disagreeable odor.

In this stage the sense of construction and oppression in the region of the stomach and liver are always present, the tenderness on pressure is very marked, and great pain with a burning sensation accompanies the nausea and vomiting. There is also great uneasiness, restlessness, and wakefulness. After a little time the skin becomes brown or of a deep bronze or yellow color; and the patient has a tendency to hawk up a tough glairy phlegm.

Each succeeding exascerbation seems o be more violent than the preceeding, all the prominent symptoms being more marked unless the patient is relieved; the surface, at last becomes cool and covered with a clammy moisture, the heart beats feebly, the tongue is dark and perhaps dry and fissured, the respiration is labored and imperfect, the abdomen becomes tympanitic with occasionally unconscious feeted discharges, the brain is dull, and all the vital powers are completely exhausted and death closes the scene.

When the disease has been less severe, or more amenable to treatment, instead of an increase of severity in each succeeding paroxysm, the surface becomes cooler, the pulse lower and fuller, the distress in the stomach diminishes, the tenderness at the epigastrium abates, the pain in the head and back gives way, the febrile stage is shortened and the period of intermission correspondingly lengthened, the tongue looses its coat and appears more natural, the countenance looses its haggard and anxious look, the patient enjoys more of comparative freedom from pain with quiet and refreshing sleep, until, finally there are no perceptible

paroxysms of disease, the remission being continuous, and the patient gradually is restored to health, only however, after a protracted convalescence.

As in Intermittent fever, in the milder cases of this there is usually a distinct increase of all the febrile symptoms, and a distinct remission each day; but in the more severe forms the remissions are of short duration, incomplete, irregular in the time of their appearance, and may pass quite unnoticed by the attendant. Hence it is that this disease is not seldom spoken of under the name of Bilious Fever and ranked with the Continued Fevers.

Unlike the Continued Fevers, Remittent fever, does not appear to have any definite period of time in which to run its course. In this regard it resembles Intermittent fever. Intermittents may be checked after one or two returns of the chills. So it is with remittent fever. It may terminate after a few days, or it may continue for a long time without any material change. The more common duration is from ten to fifteen days; but a very protracted duration of the disease is not very uncommon, the patient after the second week sinking into a debilitated condition, with a partial or complete obliteration of the period of remission, giving the disease the appearance of the low forms of Typhus disease. This is very commonly styled the Typhoid stage of Bilious Fever, and has led to the error, which is quite prevelent in the South and West, of supposing this peculiar condition, to be what is meant by authors when they have spoken of Enteric Fever under the unfortunate appellation of Typhoid Fever.

In the typhoid condition, as has been observed, the usual well-marked division between the febrile stage and the stage of remission is scarcely discernable or is entirely obliterated, and the patient has a fever almost continuously, perhaps for days and even weeks, until he finally recovers, or the attack terminates fatally. The pulse gradually becomes very small and wiry, the tongue looses its coating and appears red and dry, or loaded on its edges with the foul sordes that accumulate around the teeth and lips; the stomach becomes torpid, and ceases to feel nausea; the discharges from the bowels become dark or even black; the patient is comatose or stupid; the countenance becomes dull and inexpressive and languid; there is tremor of the muscles with

picking at the bed-clothes and other indications of nervous prostration. When the patient sinks into this *typhoid condition* the disease may be protracted for even a month or more.

The various symptoms of remittent fever point to the liver and the stomach as parts of the system which are chiefly affected. Sometimes, also, the brain and lungs are implicated, but secondarily from the previous primary disease. The derangement of the liver is so constantly present that it may be considered as pathognomonic of the disease, this derangement being produced by the materies morbi having found lodgement in the blood and thus producing disease of one of the organs through which the blood so freely flows. The hepatic derangement almost always induces disease of the gastro-enteric mucous membrane, which membrance is almost always found affected in post mortem examinations of those who have died of remittent fever.

When the hepatic derangement is peculiarly marked, the disease has been called *Hepatic remittant*; and when the gastric derangement has been specially prominent, it has been called *Gastric remittant*.

When the liver is more than ordinarily implicated, there is more than usual febrile heat, the pain in the head is violent, there is tenderness and swelling of the liver and fullness of the right hypocondrium, marked irritability of the stomach, with vomiting of matter without any traces of bile, the tongue is notably clean in the earlier stages, a yellowish or jaundiced state of the skin and eyes, and great torpidity of the bowels until the biliary ducts become disgorged, when the amount of dark tenaceous matter discharged has led some to suppose the discharge to be critical.

When the stomach and intestines are conspicuously affected in gastric remittents, the thirst is quite persistent with a desire more than usually strong for acids, and a bitter taste in the mouth; there is frequent and forcible vomiting of a greenish or even a dark-brown fluid, loss of appetite and even loathing of food; a feeling of weight, pressure, and anxiety at the pit of the stomach, and pain and tenderness across the upper part of the abdomen; often intense pain in the small of the back and down the limbs to the knees, with tendernes in the calves of the legs; constant severe pain across the forehead; the tongue is thickly coated along the

centre, with thick yellow and tenacous mucus, while the sides and tip are red; the bowels are quite torpid, and when there is a movement the discharges are thin and watery and attended with severe gripings, but in the later stages of the disease, the discharges appear red, with perhaps shreds as of washings of meat. Towards the close, the urine may be retained or suppressed, the abdomen swollen, difficulty of swallowing, while the tongue becomes dry, red, smooth, and shining.

Although cases are met with in which there is a marked preponderance of either the hepatic, or of the gastric derangements, a giving rise to the peculiar symptoms described, far more commonly there is a blending together of these two complications, together with a blending of the symptoms these derangements give rise to.

Remittent fever sometimes presents an appearance or a series of phenomena quite different from those here detailed, and many observers have hence supposed patients thus affected to have an entirely distinct disease.

It has been observed, that, in many localities where remittent fever was very prevalent, owing perhaps to the combined influences of a different diet, a different mode of living generally, but particularly to changes in the miasm of the locality caused by drainage, the cultivation of the soil, or otherwise, that Agues have become far less frequent or disappeared entirely, and the former highly inflammatory forms of the febrile epidermics have also passed away, and in their place there is now to be met with a peculiar form of remittent fever often styled Congestive fever.

The peculiar symptoms of this form of fever are a coldness and diminished sensibility of the surface, the skin being soft, shriveled clammy, or quite wet with persperation. This condition appears to correspond with the stage of chill in remittents. When the warm stage presents itself there is never any considerable degree of heat, and the warmth is at times confined to a part, only, of the body. The lassitude and dibility is felt over the whole body; and at times the confusion, pain, and vertigo of the head makes that debility seem greater than it in reality is. The pain in the head appears deepseated, with a sense of weight and tightness; the face is pale, with an oppressed or desponding look, and the

complexion becomes muddy or dingy; the voice is changed in tone, becomes drawling or irregular, perhaps with stammering; the breathing is labored, and frequently interrupted with sighing; the tongue at first little changed soon becomes dark, almost black; the stomach is often irritable, with fullness and tenderness of the right hypochondrium; the bowels sluggish, and the fæces dark and offensive; the dejection accompanied with pain; the pulse small, frequent, compressible, irregular, and variable.

The mental manifestations are quite similar to those at times seen in typhus. The mind is dull, confused, inattentive, with quite marked stupor, or a low muttering delirium as the disease progresses.

The remissions are not well defined, being rather a gradual augmentation and diminution of the febrile symptoms. In the cases that tend to a fatal termination, the remissions disappear, and hiccough, bleeding from the stomach or bowels, involuntary stools, and picking at the bed-clothes, give the patient decidedly the appearance of one sinking under typhus.

Remittent fever, when it appears in the congestive form, is quite apt to assume a malignant type, and to terminate spedily fatal, or the symptoms may become gradually more mild, and the patient finally recovers.

All the peculiar phenomena of an attack of congestive remittent point to the fact that the blood undergoes a great change, impressing the nerves, and embarassing the action of the heart and the lungs; allowing the blood to accumulate in the internal organs, producing Congestions, and thus embarass those organs in the performance of their functions.

As the remissions are not always very well marked, it has, by some, been questioned whether it is proper to class congestive bilious fever with the other remittent forms of fever,—but as the producing cause is nearly if not quite identical,—or the disease in the main is the same, only that the congestion produces symptoms that as it were *mark* the remissions, it seems proper to consider this as but a *variety*, and strictly belonging to the class Remittent-

Convalescense after all forms of remittant fever is always slow, protracted, and liable to interruption. Any exposure, or irregularity of diet, are very liable to produce a relapse. Wherever the

disease has been very severe, but more particularly after a relapse, the scalp has been so much effected that the hair falls off, frequently leaving the head entirely bald. When the head becomes bald after Typhus, or Enteric fever, the hair is quickly renewed and often in as great profusion as before the sickness. When the hair, falls off after congestive Remittent, if it grows again it is sparce and of slow growth. Not very seldom the hair falls off entirely, and the patient remains bald thereafter.

During the entire period of the long and tedious convalescense following congestive remittant, the alimentary canal and the blood-making organs remain affected and perform their functions with difficulty, so that but a slight error in regard to diet or to exposure is very sure to induce a return of the disease or cause derangement of some organ or organs. Imperfect excretion of bile, congestion of the biliary ducts, and jaundice, very frequently follow an attack of the congestive form of remittant fever. entire substance of the liver is sometimes diseased, with enlargement and an induration which materially obstructs the return of blood through it, and a consequent derangement of the functions of the various abdominal viscera, producing ascites, anasarca, diarrhœa, dysentery, hemorrhoids, hemorrhage from the intestines, or perhaps fistules in ani. The spleen is also frequently affected, but does not often become permanently enlarged and indurated as is seen after an attack of Intermittent fever.

Post mortem examinations confirm the teachings of the symptoms, and show that as in intermittent, so also in remittent fevers the liver, the spleen, the lungs, and the stomach, and more remotely the brain, are the organs which suffer during the disease. In cases of congestive remittent, where death occurs apparently from the congestion of some of the organs without the apparent reaction, there is usually to be observed excessive congestion of the liver, spleen, lungs, and brain.

In the milder form of remittent fever, where there are no permanant congestions of any organ, and the periods of remission are quite marked and distinct; and where the vital forces of the patient have not been diminished by fatigue, exposure, previous disease, intemperance, or other depressing influences; and the patient is not obliged to suffer from mismanagement or erroneous

treatment,—the disease does not prove fatal nor difficult to manage, especially where the treatment is commenced before it has progressed far. But there are frequently met with epidermis of the disease that are quite fatal; and when it assumes the congestive form it is one of the most fatal of all fevers. Those particularly to whose systems the climate influences make new and unusual impressions—the unacclimated—have the disease in an unmanageable, and often fatal form. If, in addition to a want of acclimation, the patient has been a careless liver, intemperate, or subject to unusual mental excitement, the disease is quite liable to be very active and quickly fatal.

Remittant fever, being a disease caused by a miasm produced by high heat, is the peculiar summer and autum fever of the Southern states; and as the producing cause cannot be generated except there be a considerable amount of heat from the sun, it disappears at the approach of winter.

Treatment. In the treatment of remittent fever, the nature and prevalence of the producing cause must never be lost sight of, whatever be the form or gravity of the complications present.

The inflamatory excitement and inordinate action of the heart must be controled, and that by measures that will not diminish the vital forces. It has too often been supposed that either bloodletting or the use of tartarized antimony and potassa were the only reliable measures for controlling and subduing inflammation, and the one or the other have been relied on, but with such a uniformly fatal termination to the cases thus treated that physicians have tried *stimulation* instead, as the only alternative.

Those who have resorted to stimulants have undoubtedly proved that course of treatment to be less liable to result fatally than where depletion has been resorted to. But neither course should be solely relied upon. There are Sedatives which control the action of the heart and subdue inflammatory excitation quite as certainly as that can be done by the depleting influences of the lancet or antimony, and such sedatives should take the place of and entirely exclude depletion in the treatment of all forms of fever and inflammation.

The tincture of veratrum viride, of late years, has become fully established as a sure sedative to the heart and the circulation.

The tincture of aconite root has also proved itself possessed of great power for the same purpose, and given great satisfaction to these who have made a trial it. But both of these are liable to accumulate in the system to an extent that renders them at times somewhat unmanageable. The tincture of gelseminum, has never disappointed those who have relied upon it when it has been properly prepared, and is fast coming to be the sedative which should be relied upon in all forms of miasmatic fevers.

Either of the three sedatives named may be used, in such doses and as often repeated as it is necessary to keep the circulation nearly normal. If the tincture of veratrum viride is resorted to, the dose should not at first be more than from three to eight drops, repeated once in three or four hours, and cautionsly increased if necessary. It is liable to cause a sudden and great depression with vomitting that is dangerous. Ammonia, or alcohol, and opium, are good antidotes for the over action of veratrum viride.

When the tincture of aconite is resorted to only the tincture of the root should be prescribed. The dose is from two to six drops, repeated once in six or eight hours. This does not lessen the rapidity of the pulse very much, but lessens the fever, and particularly defibrinizes the blood. I cannot recommend it to be relied on in remittent fever where the tincture of gelseminum can be commanded.

Without any doubt the tincture of gelseminum is a powerful, and when properly administered, a safe agent for controlling the circulation. It may be given in doses of from ten to thirty drops, and be repeated once in from three to six hours. It will lessen the action of the heart, the frequency of the pulse, the difficulty of respiration, the congestion of the lungs and head, the throbbings of the temples, the redness of the face, the congestion of the liver, the turgescense of the spleen, the heat of the fever, the pain in the loins, and other febrile symptoms. It will also aid the proper remedies in establishing a free flow of bile. Its use may be continued day by day as long as the febrile excitement continues to return.

No one who observes the almost uniform sluggishness of the liver and bowels in this fever will fail to preceive the necessity

of using some agent that shall re-establish the biliary secretion and overcome the constipation. Those who have been accustomed to resort to calomel to produce these results are apt to suppose this vaunted specific has no substitute. But the experience of a large member of physicians has established that there are other agents quite as certain to rouse the liver and bowels from their inactivity as are the mercurials, and which are not liable to produce the immediately uncontrollable forms of disease, or the constitutional derangements that occasionally follow the administeration of calomel.

The prepared oxgall, in doses of from five to twenty grains, in combination with a cathartic, will cause the bile to flow freely. So, also, will, perhaps, the extract of dandelion. The sulphate manganese in doses of from five to twenty grains, repeated once in six hours will seldom fail of producing a free secretion of bile. Aloes in doses of from five to ten grains, either alone, or in combination with some more active Chologentic, will not only overcome constination but will also usually produce a bilious discharge. The compound extract of colocynth of our Pharmacopæia is an admirable agent, in these cases also. But perhaps the leptandria Virginica, in infusion, each dose containing the strength of from ten to twenty grains, repeated once in six hours until the bowels move, and as may be required during the disease, is the best cathartic that can be resorted to. The action of the cathartic may often be aided with advantage by laxative or slightly stimulating injections. After the flow of bile has become established. the injections alone, or in combination with mild laxatives, will be all that is needed to keep the bowels open.

The skin, at times, is quite hot and dry in this disease, and the sedative influence of gelseminum, by lessening capillary congestion and consequent pressure upon the cutaneous extremities of nerves, will do much to lessen or overcome this heat. But it should not be relied on alone to produce this result. Sponging the surface often with cold vinegar and water will give great relief from the excessive heat, and aid in inducing and prolonging the period of remission. Thorough, careful, and systematic ventillation, will also tend to the same result. The sponging should always be resorted to before the invasion of the hot stage. Even

the cold bath, if the patient can endure the effort of taking one, may often be applied at that time with benefit. When the surface is cool and moist there is no demand for even a sponging, and bathing in that condition would prove injurious.

The patient, at all times, should be allowed to drink of cold water or cold lemonade or other acid drink to the full extent of his desires.

As a diaphoretic, in the earlier stage of the disease, sweet spirits of nitre and fluid extract of valerian in equal proportions, and a teaspoonful of the mixture at a dose, as required, is as good as anything. After the disease has progressed, the acetate of ammonia in solution or an effervescing draught of lemon juice in sweetened water with carbonate of ammonia, is admirable. A tablespoonful of lemon-juice in half a tumbler of water to which is added fifteen grains of the bicarbonate of ammonia will make a good diaphoretic draught that will not be unpleasant.

No blisters can be allowed to be placed upon any part of the patient; but it may be desirable to apply mustard over the stomach, along the spine, at the nape of the neck, or about the feet and ankles, as its use may be indicated.

The appetite is seldom sufficient to demand much food; but a little toast water, a slice of an orange, current or plumb jelly, a little rice water, thin gruel, or panada may be taken with benefit. And when convalescence is established he may have any of the perfectly ripe and undecayed fruits of the season, especially those that are acid or subacid, and then a little beef-tea, or beef or chicken broth, fresh oysters, newly laid egg, and various meats, carefully and plainly cooked. As the convalescence is very tardy, bitter infusions, or infusions of some aromatic bitter plant, bark, or root, should be taken before the food to keep it from putrefaction and to aid disgestion. The food should be prepared neatly, presented to the patient in small quantities at a time, repeated several times a day, and removed entirely from the sick room as soon as the patient has finished eating.

The restlessness and wakefullness that accompany remittent fever at times become a source of serious annoyance and danger. As any preparation of opium would have a tendency to aggravate the internal congestion and add to organic torpidity, the combi-

nation of the fluid extract of valerian to the spirits of the nitre has been recommended with the view of affording relief from this troublesome symptom. In addition, Hoffmann's anodyne, in half-teaspoonful doses, or the tincture of strammonium in doses of from two to ten drops, or the tinture of hyosciamus in doses of from five to fifteen drops, or an infusion of the root of the cypripedium or of valerian, or the leaves of the clematis vitalba, or the scullcap herb, will be found quite beneficial.

For the removal of the specific poison that produces remittent fever, the Antimiasmatics must be used. Those spoken of when treating of Intermittents will be found as useful in this as in that form of fever. But antimiasmatics are not capable of doing very much good until the derangement of the stomach and blood-making organs has been subdued in part at least. If sulphate of quinia or the other antimiasmatics, is dissolved in a considerable quantity of fluid, and in solution given to the patient, the stomach will be able to allow it in that form to pass into the circulation sooner than if given in the form of pill or powder.

As soon as it is judged that the medicine will pass into the circulation, certainly as soon as there is a remission of the febrile symptoms, the antimiasmatic should be given, and the dose repeated as often as the condition of the patient will allow. If sulphate of quinia, by means of a few drops of elixir vitriol, is dissolved in the tincture of gelseminum, the combination will be found very useful and convenient. The amount and frequency of dose, in the administration of quinia, must be determined by the condition of the patient. A very large amount may be required to remove all the miasmatic poison from the system, especially if the patient is still exposed to a repetition of the cause of the disease during the period of convalescence. Thirty, forty, sixty, or even an hundred and twenty grains, have been given daily with apparent benefit.

When remittent fever a sumes the *congestive* form, energetic measures must be adopted to bring as much blood to the surface as possible, and thus relieve the internal congestion. Steam should be conveyed under the bed-clothes of the patient, blankets rung out of hot water placed around his feet and legs, bottles of hot water placed to his spine, and stimulating disphoretic infu-

sions given to the extent of the capacity of the patient's stomach. This matter of giving medicines, or making use of other measures to cause the bleed to flow with uniformity in different parts of the system,—to equilize the circulation,—is carefully attended to by many practitioners, but is strangely neglected by others who in other regards are quite scientific and rational in their practice.

Copious stimulating and hot injections will not only aid in relieving the congestion, but also in unloading the intestines and liver of the vitiated excretory matter that adds to the embarassment.

As soon as the congestion yields, sulphate of quinia in large and repeated doses should be given. As large doses as twenty, thirty, forty, and even sixty grains of quinia have been given, and repeated at very short intervals, with the result of very speedily breaking up the fever. But it is questionable if such excessive doses are ever required.

The management of a case of congestive remittent, during convalescence, is the same as in those cases where congestion has not occurred. Great care must be taken not to overtax the vital forces of the patient. Even slight efforts of the body or mind may prove injurious, and mental anxiety and care proves especially hurtful.

There is one peculiar result which is not seldom produced by Remittent and Typhus fevers which should not be allowed to pass unnoticed. The moral character of the patient may be greatly changed from what it was in health, even for a long period after convalescence appears to be perfectly established. We observe that it takes months for the scalp to become covered with hair, and that in some instances the baldness is permanent. Close observation proves that the mental and moral manifestations are also a long time in assuming the normal characteristics; and that at times the moral character appears to be as much changed by the disease as is the appearance of the external covering of the head. This is no place to pursue the investigation of this interesting subject, but it should not be forgotten by the physician.

A CASE OF CUTANEOUS DISEASE.

BY W. G. BRUCE, M. D.

Several months ago John M. Handy, Esq., of Coluitport, called at my office and requested me to examine an eruption of the skin from which he had been suffering for four years previously. I examined as desired, and found the difficulty, to consist of bunches, some round, having a semblance to that arising from the stings of bees and other poisonous insects, others were in long ridges, such as might arise from blows with a whip or cowhide. These bunches were of a bright red color, and attended by most intolerable itching and burning. When the bunches are not present they may be irritated into existence by scratching or rubbing briskly upon the surface for a few moments.

This gentleman was treated for a long time by a homoeopath, but without the slightest signs of relief; he has also been treated for the same difficulty by physicians in Boston, but all to no purpose. He is a man of unblemished character, therefore I can safely state that he never has been tainted with syphilis or anything of the kind:—scrofula is not common to the family. He is very particular about dieting himself, never eating anything in the shape of fat meats, or highly seasoned-food of any kind.

In the treatment of this case I have used all of those remedies that have proved effectual in similar cases heretofore, but with little or no effect; I am therefore, induced to ask what treatment to adopt in the case. Any suggestion relative to this particular case will be most gratefully received.

NOTES AND COMMENTS.

BY T. C. MILLER, M. D.

ALETRIS FARINOSA, (Star Grass,) is a remedy for that affection of the liver which shows itself in the form of bilious fever, chronic catarrh of the alimentary tract, diarrhea, jaundice and intermittent with hyperæmia of the liver, asthma with the same complication, and ascites. It is often necessary to combine iron with aletris, particularly in chronic cases, as cardialgia, cough with bleeding of the lungs, hectic fever, and ascites. Only a small amount of iron is required.

Anthesms nobiles, (Chamomile,) is a remedy for that affection of the spinal-marrow where the nerves of the uterus are also affected, and which shows itself in neuralgias, cardialgia, or dysmenorrhea.

APOCYNUM ANDROSMIFOLIUM, (Bitter Root,) is useful in that affection of the liver which manifests itself in a chronic hypersemia, with intermittent. The volatile oil, obtained by distillation, is the only preparation of this plant that possesses any medicinal value.

APOCYNUM CANABINUM, (Silk weed) cures an affection of the kidneys that produces anasarca, the result of albuminose inflammation of those organs. The dose should be so small as to cause neither emesis nor catharsis.

Asclepias incanata, is a remedy for that disease of the kidneys which produces asthma and gonorrhea.

Cypripedum pubescens, ($\bar{L}ady$'s Slipper,) is a remedy for an affection of the spinal marrow.

ASCLEPIAS TUBEROSA, (*Pleurisy Root*,) is a remedy for a peculiar disease of the mucous membrance.

IRB VERSICOLOR, (Blue Flag,) is a remedy for that disease of the muscles and the fibrous and serious tissues which shows itself in the form of chronic rheumatism of the muscles, and the so-called rheumatic affection of the joints, where there is no hyperæmia or swelling. Also in glandular swellings, and indurations, and eczema. It should be given in so small doses as not to produce active catharsis. In large or cathartic doses, it cures a certain form of dropsy. Its action in that regard is similar to that of eroton oil, and appears unsafe as well as uncertain. For thirty years I have aimed never to depress the vital forces but always to sustain them.

RHUS GLABRA, is a remedy for primative diseases of the vascular system, showing themselves in hemorrhage with anæmia, blenorrhæa of the bronchiæ, chronic diarrhæa, leucorrhæa, or gleet, and oxaluria. It also cures night-sweats when produced by anæmia.

LIATRIS SPICATRA, cures that affection of the kidneys known as Morbus Brightii.

GEUMRIVALE, (Water Avens.) is a remedy for those diseases of the stomach that require an excitant to that organ. It is very 20

valuable in intermittents when the inactivity of the digestive organs interferes with the administration of quinia.

TRIOSTEUM PERFOLIATUM, (Fover Root,) is a remedy for that affection of the liver which produces acute hepatitis, muscular rheumatism, or bilious fever. It is valuable as an external application to painful swellings.

Prince verticulatus, (Black Alder,) is admirable for an affection of the vascular system that produces chronic diarrhosa.

EPIPHEGUS VIRGINIANUS, (Beech drops,) possess the same properties and powers as does black alder.

ALNUS RUBRIA, (Tag Alder,) has the same therspeutical properties as black alder and beech drops,

ERIGERON ANNUUM, (Flea Bane,) is a remedy for an affection of the kidneys that produces dysury strangury, ischury, ehronic diarrhosa, metrorrhagia, hectic fever, and anasarca.

HELONIAS DIOICA, (False Unicorn.) is a remedy for an affection of the uterus that shows itself in dysmenorrhosa, amenorrhosa, metrorhagia, leucorrhosa, and neuralgis of the ueterus.

Polygala Bubella, (Bitter Polygala,) is a remedy for chronic catarrh and blenorrhagia of the bronchial mucous membrane,

SABADILLA ANGULARIS, (American Centaury,) is a remedy for that affection of the liver that produces acute catarrh of the intestines and stomach.

COPTES TRIFOLIA, (Gold Thread,) is a remedy for that affection of the liver which produces hypermia of that organ, often in combination with diarrhea, icterus, cardialgia, and ascites. Frequently iron is demanded at the same time.

MENYANTHES TRIFOLIATA, (Buck Bean) produces effects similar to gold thread.

LIRIODENDRON TULIPIFERA, (American Poplar,) is a remedy for an affection of the liver combined with enteric fever, bilious fever, and intermittents, with hypermia of that viscus.

Its therapentic properties all reside in a volatile principle in the bark, and the distilled water is the proper preparation; that agrees with the stomach admirably. It possesses superior Anthelmentic properties also.

DEACONITUM, (Skunk Cabbage,) produces an effect on the nerves of the lungs that enables it to cure nervous authors,

nervous cough, pertussis, and a certain form of palpitation of the heart.

HEPATICA AMERICANA, (Liverssort;) is a remedy for some affections of the bronchial tubes which produce chronic eatarth.

MARURIUM VULGARE, (Horehound,) also makes its impression on the mucous coat of the bronchial tubes.

BOOKS, PAMPHLETS, ETC.

The editor of this Journal has issued the second edition of his Physician's Memorandum, for 1861—and as it possesses some peculiar and unique characteristics, which are expected to make it of peculiar value to physicians and especially to those who practice in the country, it may be well to mention some of them.

1st. It contains a full Classification of Medicines used in practice—with their Action on the system—their mode of Preparation—and the Doses of each form of preparation.

2nd. It contains a full list of Abbreviations used in writing prescriptions, together with the words or phrases abbreviated, and an English translation. This enables even those who are not intimately acquainted with the languages to read the prescriptions in any book with readiness.

3rd. Full directions are given for the immediate management of all Accidents and Emergencies, with the directions arranged in *alphabetical* order, for convenience of reference. This part of the book has been found to be of great utility.

The third division contains full directions for the treatment of cases of Poisoning, together with a very full list of *Poisons and their Antidotes*.

4th. Full and definite directions are given in regard to making Post Mortem examinations of all parts of the body.

5th. The best modes of Preserving or Embalming bodies for delays in burial, for transportation, or for dissection, are carefully explained.

6th. Careful directions, with a plain Rule for the Prescription of Medicines.

7th. This division of the book contains a Calender of the entire year so arranged and ruled as to take the place of the Day-Book of Accounts, and to record the visits to Sixty patients a day. No Day-Book is needed where this is used, and much larger space is allowed for this record of Practice than is allowed in any similar work.

8th. There are a large number of blank pages, designed to be used as a General Memorandum, and in such a way, and for such purposes as the desires of each individual may indicate.

The Memorandum is made of the best paper, and substantially bound in flexible binding, with *tuck*, *pocket*, place for *pencil*, and the usual arrangements of a Pocket-Book.

The amount of printed matter is fully equal to that in ordinary small volumes, being nearly an hundred pages in fine type; and yet with all the superiorities of value and expense over similar works, it is sold for only One dollar a copy.

Another volume, the Tenth, of the New American Cyclopædia, from the press of D. Appleton & Co., of New York, has been received, containing articles from Jerusalem to Magreren. Each succeeding volume tends to increase the reputation of this gigantic work, and to establish the public in the opinion that its equal has never before been issued in this country.

Keith Imray's Popular Cyclopedia of Domestic Medicine, which was so favorably received in Great Britian some years since, is now published by Collins & Brother, of New York. In many regards it is far preferable to many of the Family Physicians recently published.

The latest work of Dr. W. A. Alcott, the well-known Lecturer on Health, Hygiene, and Physiology, and author of The Library of Health, The Young Mother, The Young Housekeeper, and The House I Live In, is received.

Written in the very felicitous style of the author, and reflecting the broad range of thought and the comprehensive view of details for which Dr. Alcott was noted, this work, although incomplete in some regards, will prove of value to those who bestow upon it the careful study and continuous thought which its contents and subject demands

We have had occasion to heartily commend Geo. H. Lewes's Physiology of Common Life. His smaller work, Studies in An-

imal Life, which was first contributed to the pages of the Cornhill Magazine, has recently been issued in book form by Harper & Brothers, of New York.

Mr. Lewes has one of the most comprehensive of minds and can see the errors of modern as well as of ancient physiologists; and in this little work he has demonstrated the connection of apparently unimportant common facts with the great universe and the laws of animal life. It is a model work and well worthy the attention of all.

Dr. N. Bedortha, of the Saratoga Water-Cure, has published a work that he calls *Practical Medication*, or the *Invalids Guide*,—with a view of furnishing the friends of the author with practical directions in the use of water as a remedial agent.

The work contains brief chapters in regard to Anatomy and Physiology, Diet, Beverages, Clothing, Exercise, Rest and Sleep, Amusement and Labor, Disease, and What is a Remedy, and the remainder of the work is devoted to the uses and applications of Water, and the consideration of some of the more common diseases, in the treatment of which other medicines are used in conjunction with water—the whole followed by a dozen or so Recipes. It appears to be very well adapted to fulfill its design.

- Dr. D. A. Gorton, of Peekskill, has published a little monograph on *Dyspepsia*, for popular circulation. To the profession it will prove of but very little value.
- S. S. & W. Wood, the New York Medical Book Publishers, have sent through the house of Rickey Mallory & Co., of this city, a copy of the Second edition of Prof. Jacob Bigelow's work, Nature in Disease, the first edition of which was published five years since and attracted no small share of attention; which has led his later works, "Brief Exposition of Rational Medicine" and "Self-Limited Diseases," to be more widely read and more deeply pondered than any other similar previous work. These works, together with Dr. Forbes' "Nature and Art in the Cure of Disease," and Sir B. Brodie's "Mind and Matter," also published by the Woods, are producing a great reformation in the practice of medicine.

IPECACUANHA IN DIABRHŒA AND DYSENTERY. By E. S. Cooper, M. D.

Perhaps few remedies have been so highly extelled by different authors in any disease as ipecacuanha in diarrhea and dysentery; and particularly this may be said in regard to the various indications it is designed to fulfill in different cases. Thus Eberle regarded it as the first remedy in acute dysentery, given as an emetic, representing it as almost the only one for overcoming the torpor of the external capillaries and breaking up morbid sympathetic actions throughout the system in that disease. While Lane and Shorb found it to be almost a specific in the various forms and stages of both diarrhea and dysentery. They combined it with opium and acetate of lead, and gave it internally in extremely small doses, frequently repeated,—say one-sixteenth of a grain of each, given every ten, fifteen, or twenty minutes.

This has in my hands proven the most efficient remedy I ever used in the different types and varieties of these diseases. But while I have had the greatest satisfaction in the use of ipecac emetics in the early stages of acute dysentery and diarrhose, and also its combinations with opium and lead, given in the very small doses above mentioned, during the various stages and in the different forms of these diseases, I have yet found many cases in which ipecacuanha combined with extract of gentian in the proportion of one-half grain of the former to one of the latter, every hour, acted almost like a charm in the advanced stages of protracted cases, where the other remedies had only produced a palliation of the symptoms.

Taking it altogether, I think ipecacuanha in its different combinations may be more advantageously given in diarrhœa and dysentery than any article in the materia medica.

In these two forms of disease, the increased activity of the intestinal canal, or the irritation in it, tend at once to produce a centripetal direction of the excitement and blood; and ipecacuanha, by overcoming the torpor of the external capillaries, and interrupting the morbid sympathetic action throughout the system, without producing irritation of the stomach or depression, is best calculated to relieve this condition.

ON THE USE OF DILUENTS IN CERTAIN FORMS OF NEURALGIA

Dr. Peebles, one of the editors of the Virginia Medical and Surgical Journal, furnishes that monthly with some observations on the use of diluents in that form of neuralgia which is now believed to arise from a vitiated state of the blood, the pain being, as Romberg has happily expressed it, "the prayer of the nerve for healthy blood." It is assumed that neuralgic pains may have their origin in some irritating matter in the general circulation, impinging upon the nerve tissue. With this assumption the principle in the treatment will, of course, be a direct modification of the blood, to remove its irritating properties. This object can be in a measure obtained in a short space of time by the rapid introduction of diluents into the system. This may be done by the use of copious draughts of barley or toast water, or thin gruel, or even of plain water.

In support of the argument, Dr. Peebles alludes to the fact that women suffering from hysterical neuralgia exhibit, habitually, remarkable exemption from thirst. They partake of very little fluid drink beyond the coffee and tea drank at their morning and evening meals. Yet it is well known that these women habitually discharge great quantities of water in the form of urine. cases the skin will be found harsh and dry, while the mucous membranes ordinarily exhibit more than a normal degree of moisture. Since Dr. Peebles' attention has been directed to this remarkable connection between absence of thirst and the form of neuralgia under consideration, he has often observed it in the opposite sex, where it presents itself under circumstances nearly similar. "Men apparently healthy in their appearance, are often found subject to violent and frequently repeated attacks, chiefly of frontal neuralgia. These attacks are associated with gastric and renal disorder, and general nervous derangement, indicated by coldness of the hands and feet. In a large majority of these cases it will be found, on inquiry, that these men consume less water habitually than is the ordinary standard of healthy individuals. * * Now, it is in just such cases as these that we would direct the attention of the practitioner to the use of copious diluents in their treatment. By rapidly diluting the blood through these simple agents. I have frequently seen a paroxysm suddenly relieved."

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

Acontra. Aconitum Napellus. Woolfsbane. Monkshood. A plant known to the earlier Greek writers as a most virulent poison; but perhaps the aconite they spoke of may have been a different variety from the one Officinal at the present time. However, Nicander, Ovid, Diodorus, Dioscorides, Galen, Pliny, Avicenna, and others, speak of a plant having the same name and the same toxicological properties of the modern Aconitum.

Both the herb and the root are used in medicine, but while the different parts of the plant possesses the same medicinal power their activity is so different that properly one part only should be

used, and I think the root alone should be employed.

Aconite root contains several distinct bodies, but the medicinal power seems to reside mainly if not entirely in the alkaloid Aconitia. (See Aconitia.)

Aconite readily yields its active principle to alcohol, when it may be used in the form of the tincture, or with the alcohol evapo-

rated so as to form the alcoholic extract.

Tincture of Aconite Root is ordered to be made Officinally by adding one pound of the recently dried and loosely powdered root, to two pints of rectified spirits,—and may be made either by maceration as was formerly the usage, or by displacement.

There is another preparation called Dr. Fleming's Tincture of Aconite Root, made by using one and a quarter pounds Troy of the root, to one pint of Alcohol. It is quite unfortunate that there should be made tinctures of this powerful herb of different strengths; and the profession will do well always to use the officinal tincture of the root, and thus secure uniformity in practice and in the reports of cases.

The Pharmacopæia also directs a Tincture of Aconite Leaves, made by adding only four ounces of the leaves to two pints of Dilute Alcohol. This is a weak and uncertain tincture and had

better never be ordered.

The dose of the officinal Tincture of the root of aconite, is from two to ten drops, and it is safer to commence with the smaller quantity and gradually increase the dose. These doses may be

repeated once in six or eight hours.

The *Tincture of the Leaves* is of uncertain strength, but is given in doses of from ten to thirty drops. The tincture known as Dr. Fleming's is stronger than the officinal preparation, and may be given in doses of from one to six drops if ever ordered. The special form of tincture designed to be used should be clearly indicated in the prescriptions.

The Extract of Aconite is prepared by taking a pound of fresh aconite leaves, bruising them in a stone mortar, sprinkling

on them a little water, and then expressing the juice, heating the juice to boiling, straining and evaporating to the proper consistence. This is an uncertain preparation and should not be used.

The Alcoholic Extract of Aconite, is made by taking of the freshly dried leaves of aconite in coarse powder, one pound, dilute Alcohol, four pints, moisten the powder with the alcohol, and after twenty-four hours make a tincture by displacement in a percolator, when the alcohol may be distilled off and the extract reduced to the proper consistence.

Another extract of Aconite is made by using the root in coarse powder in place of the leaves as directed in the Pharmacopæia.

These extracts may do well to be applied externally in the form of plasters, but are much too variable in strength and too uncer-

tain to be given internally.

Aconite when taken by a person in health, internally, in small doses, produces a sensation of warmth and even of burning in the mouth, fauces, throat, and stomach, with, perhaps, a slight feeling of oppression at the stomach, when the feeling of warmth extends over the whole system. This, if the dose has not been quite small, is followed by a sensation of numbness and prickling in some part of body, perhaps on the extremities, or at the roots of the teeth, together with a feeling of weakness in the muscles,—or rather, perhaps, an inability or unwillingness for mental and muscular action. The pulse does not appear to be affected in any way. But it produces a very marked series of effects, differing from those following its administration to those in health, if given to those laboring under any form of fever and in some diseases of the nerves. It seems peculiarly entitled to be called an Antiphlogistic.

In all conditions of the blood, where the peculiar condition called *febrile*, obtains; as Typhus, Enteric, Febricular, or the Eruptive Fevers, and Rheumatism, it appears always capable of producing a favorable change in the blood and on the nerves. In Intermittent and Remittent Fevers it does not seem as useful as in other forms. It appears quite incapable of freeing the system of the miasm which causes or complicates certain forms of

fever.

In Inflammations and Congestions, where there is an increase of the *fibrine*, it is also useful,—as in inflammation of the lungs,

the heart, and in rheumatism and dysentery.

In various forms of *Neuralgia*, the topical application of the tincture produces almost instantaneous, and at times permanent, relief. In hurts and bruises causing great pain, if applied in conjunction with the Tincture or Infusion of Arnica Flowers, very great benefit and relief will follow. In neuralgia above the eyes,

facial neuralgia, or intercostal neuralgia connected with rheumatism of the chest, its application will almost always allay the pain. If the pain is produced by congestion and pressure on the nerve, that pressure must be removed before the pain can be subdued.

Acoustric Acid. Obtained by L. A. Buchner, by the decomposition of the crystals of Aconite of Lime, which are formed on the evaporation of the juice of aconite. It may also be formed by the action of heat on Citric Acid, or by submitting Citric Acid to the action of heated Muriatic Acid for several hours, and then evaporating and extracting the Aconitic Acid by Ether.

Aconomic. A name sometimes erroneously given to the al-

kaloid Aconitia.

Acontria. An alkaloid supposed to contain the active medici-

nal properties of the Aconitum Napellus.

About the year 1811, Hesse, Subeiran, Berthemot, and Turnbull, gave directions for making Acomitia, and Turnbull introduced it into practice. It is prepared by making a tincture of the root with boiling alcohol, evaporating, and dissolving the extract with diluted sulphuric acid, and decomposing the sulphate with ammonia, when the Acomitia will be precipitated and may be purified by re-dissolving it in water rendered acid by sulphuric acid, and again precipitated by ammonia.

This is a very powerful preparation. Even one-fiftieth of a grain came near producing a fatal result. It is also very expensive, and the Tincture appears to possess the same therapeutical

properties.

ACONTTINA. The English name for the alkaloid Aconitia,

which see.

ACONITUM LYOOTONUM. A plant of the Monkhood tribe, analysed by Pallas, but not used in medicine.

ACONSTUM MEDIUM SCHEADERS. One of the Monkhood tribe

of plants, analysed by Bucholz.

ACONITUM NAPELLUS. Aconite, which see.

Acontrum Panicalatum. One of the Monkhood tribe of plants. This was supposed by Stork to be the officinal Aconitum Napellus, and published by him as such. At present it is not to be

found in the drug market.

In addition to the above named varieties of the Aconite plant, the French Codex mentions several, and recognizes as officinal the A. anthora, and A. cammarum. The A. neonatum, according to Geiger has but little medicinal power. Dr. Christison, found the A. sinense, the A. tauricum, and the A. uncinatum, to be but little inferior to the A. Napellus. It is said that the root of the A. heterophyllum is used as an Antimiasmatic in various parts of the Canadas, particularly in Canada West.

Acorus calanus. Common Sweet Flag. This plant has been used in medicine from time immemorial. The rhizome is officinal in the Pharmacopeeia under the name of Calamus,—which see—and is worthy of more attention than is ordinarily given to it.

It is employed in England and on the Continent, by some manufactures to impart its flavor to gin. It is also used by snuff-makers for scenting anuff. Also in the preparation of aromatic

vinegar.

Acqua Balsamica Arteriale. Acqua Binelli. A preparation invented by Dr. Fideli Binelli, an Italian Physician, who ascribed to it almost miraculous powers as a styptic in all forms

of hemorrhage.

The first public trial to which he submitted it at Turin, in 1797, by order of government, seemed to confirm all that was claimed for it. Soon after, Binelli died, but previous to his death had communicated the method of making this famous water to his friends Gaetano Pirouti and Andrea Ferrara, who made the manufacture of it a profitable business for some years.

After then the secret was said to have been lost; but was affirmed to have been re-discovered in 1829 or 1830; and a great

variety of experiments were tried with it in Germany.

Davy demonstrated that this celebrated water in reality possesses no more styptic action than simple water; and Dr. Macartney amputated a hand without applying a ligature, to any bloodvessel, but restrained the hemorrhage by means of lint kept wet with cold water.

. Acqua Binelli. (See above.)

Acqua Brocchieri. Brocchieri Water. A nostrum much in use in Paris about the year 1835, which in its claims, its sensible properties, and its action, closely resembled the water of Binelli.

In 1846 Prof. Mott pronounced Brocchieri an uneducated man and a charlatan. This water was carefully tested by a large number of medical men who decided it to be entirely unworthy of confidence.

Acqua Monterosse. A name given by M. Bouchardat, to a preparation said to be identical with the styptic water of Binelli.

Acres. A Class of medicines which stimulate, irritate, or inflame the living tissues with which they come in contact, and not by means of any recognized chemical action. As they irritate they are sometimes classed under the name Irritants; and as they do not apparently act chemically, Pereira has called them dynamical irritants.

The tollowing are those commonly in use in practice, each of

which will be particularly described in its proper place.

Amyris elemifera, resina, Anaclycus pyrethrum, radix, Allium cepa, bulbus, Allium sativa, bulbus, Abies, resina, Capsicum annuum, baccæ. Cochlearia Amorica, radix, Croton tiglium, oleum, Daphne mezereum, cortex, Euphorbia, resina, Larix, resina, Piper nigrum, baccae, Pinus, resina, Sinapis alba, seminum, Sinapis nigra, seminum. Zingiber officinale, radix. Cantharis vesicatoria. Antimona-potassio,-tartras.

ACRID LETUCE. Lactuca virosa. Lactuca. Strong Scented Letuce. The plant which yields a milky juice which when dried is the *Lactucarium* of commerce. The same drug is also furnished by the common garden Letuce but in much less quantities. See *Lactuca*, and *Lactucarium*.

ACRID RESIN. A substance obtained by Souberain from Castor oil, and to which he ascribed the purgative properties of the oil.

Acrita. The name of a Subdivision of the Invertebrated animals according to Macleay's Classification; it includes several animals whose products are used either in medicine or surgery. Owen describes this subdivision as having a nervous system indistinct, diffused, or molecular." It includes the Sponges, and the Polypes.

Accordens. A class of plants, according to Brogniast, in which the substance of the plant is composed chiefly of cellular tissues and of vessels; with the cuticle having breathing pores; the stems and leaves distinguishable; and the stem growing from the point only. There are a number of Orders included in this Class of plants, but only two of those Orders include plants that are now much used in medicine—the Lycopodiacea, and Filices.

ACT. AALBA. White Cohosk. White Snake-root. One of the varieties of the native species. Sometimes mistaken for Caulophyllum thalictroides on account of the popular name Cohosh being applied to each. It is a cathartic and emetic, or an irritant to the alimentary canal. It has been but little used. The berries of this and other varieties of Actea have proved poisonous, and hence it is often known by the name of Baneberry.

Acres. Herb Saint Christophe. Cimicifuga.

Actea racemosa. Macrotrys racemosa. Cimicifuga. Black Cohosh. Black Snake-root. Rattle-weed. See Cimicifuga.

ACTEA BUBEA. Red Cohash. A variety of the Actea, with medical properties similar to those of Actea alba,—which see.

Acrea spoura. Baneberry. Herb Christopher. A plant that grows in the mountains of Europe. It resembles in appearance and medicinal properties the American varieties of Actea.

ACTEA AMERICANA. The species of Actes, of which the white

and the red, or alba and rubra are varieties.

ACUPUNCTURATION. Acupuncture.

ACUPUNCTURE. An ancient remedy which has been revived within the last few years, and is now attracting a large amount of attention. The process of acupuncturation consists, as its name imports, of the introduction of sharp points, usually needles, into the part affected, with the view of removing or mitigating the disease.

There is evidence that this process was known from the earliest times by the natives of Japan and China. They had mannekins which were called *Tsoc-Bosi*, on which the practice of operation was taught in a sysmatic manner; and finally the operator had to pass a careful examination before he was allowed to operate upon the people. In the year 1683, Ten-Rhyne, a Dutch surgeon published a work on the use and value of acupuncture, and the operation was specially refered to and described by Kampfer in 1712 in his work on Japan.

After a little it ceased to attract attention until about 1816 when Berloiz drew the attention of the profession to it; and in 1817 Beclard wrote an article on it, published in the Journal of Universal Medical Science, of Paris. For fifteen years thereafter quite a number of writers in France, England, Germany, Italy, and the United States, wrote treaties on its value and modes of

application.

A convenient mode of applying acupuncture, is to select a number of very slim steel sewing needles which have sharp points and smoothly polished. Those that are at least two inches long should be prefered. They should be heated to a red heat and allowed to cool slowly in order to render them less brittle than when they come from the manufactory. Apply a little drop of sealing wax over the eye to serve as a head. Sometimes only one needle is used, but most operators prefer to combine several in one instrument, which may be done by winding a thread of silk carefully around the needles to form them into a bundle, and carrying the thread between the points of the needles to separate them somewhat. From four to twelve needles may thus be combined.

The sealing wax that has been applied to the eyes of the needles

may then be melted into a combined mass.

To insert the needles the skin over the part should be put on a stretch, and then a slight blow or sharp stroke of the needles will make the necessary punctures; of course care should be taken to avoid wounding nerves or blood vessels of any considerable size, or perforating tendons, cartillages, or bones, as well as any of the viscera. After the needles are inserted into the flesh they should be allowed to remain from five to thirty minutes before they are withdrawn. Sometimes the conductor of a galvanic battery has been attached to the needles, and the current has thus been conducted to parts to be acted upon.

The pain produced by acupunctuation is seldom severe; but relief to pre-existing distress is manifest and speedy; and to obtain the greatest benefit the needles have usually to be made to penetrate the part from one half an inch to an inch. The pain is

renewed as the needles are withdrawn.

Acupuncturation has been found useful in gout, rheumatism, spasmodic and convulsive affections, amaurosis and ophthalmia, anasarca and ascites, and cedema of the feet, in asphyxia, nenralgia, muscular contractions, pleurodynia, cephalalgia, toothache, lumbago, paralyses, protracted lockjaw, aneurisms, varicose veins, hydrocele, and other affections. The use of acupuncturation when it is conjoined with the galvanic battery will be explained under Galvano-puncture—which see.

ADA RODEIN. A plant of the family Apocynacese, an infusion of which is used in Malabar, where the plant grows, for diseases

of the eyes.

ADAM. A Malabar plant, which is regarded by the natives

of that country as an antidote for the bite of the naja.

Adamsonia digitata. Baobab Tree. A native of Senegal. The bark of this tree is supposed by Duchassaing to be a good substitute for Cinchonia. The constant use made of it by the Negro natives in marsh fevers attracted the attention of Duchassaing, and he prescribed it in a great many cases, with eminent benefit. Saint Pierre also prescribed it in Intermittents, in Burgundy where that form of disease is endemic, with advantage.

He used a decoction of the bark, and says:—"its action is not accompanied with any of the inconvenencies that follow the use

of the sulphate of cinchonia."

Adams. A concretion that grows on the reeds of the marshes of Galatia, which was formerly used as a cosmetic to remove freekles and spots from the skin.

ADELODAGAM, A plant, used in Malabar, as a remedy in asthma;

catarrh, rheumatism, and gout.

ADERS. The fat of the hog. Sus scrofa. Hogslard. The prepared fat of the hog.

ADEPS Anserinus. Goose grease. This is often used as at

emolient.

Aners PREPARATUS. Prepared hogslard. Axunge. Prepared by taking the dense fat of the hog, melting it over a slow fire, straining through a flannel, and without anything being added, while still liquid pouring into a bladder. Lard that has salt in it may be purified by melting it in boiling water. When it is in the process of cooling it should be stirred constantly to keep the stearine and claims from separating.

Like all fats, lard serves as a topical demulcent, emolient, and shielder. In medicine it also serves as a basis for many unguents, but a proper combination of linseed oil and bees-wax is much preferable; and a combination of glycerine and starch is still better, as lard is liable to become rancid and produce much irritation.

Adhatoda. The Maltabar Nut Tree. Used in India to aid in

the expulsion of the dead fostus in cases of abortion.

Adhesive Plaster. Adhesive plasters and adhesive cloths are made of muslin, linen, or silk cloth, covered with some adhesive substance to make them stick firmly to the cuticle. The officinal Adhesive Plaster of the U.S. P. is made by taking half a pound of Resin, and three pounds of Lead Plaster, and melting them together over a slow fire with sufficient stirring to have them thoroughly incorporated. Some apothecaries add Bergundy pitch or turpentine. Various kinds of Adhesive Cloth are made by spreading glue or gelatine over the cloth to make an adhesive coating. Each year the manufacture of adhesive cloths has improved, until now they nearly supercede the adhesive plasters, which are seldom used by the best surgeons.

ADIANTUM. Maidenhair. A fern, the syrup of which is sold in the shops in England under the name of *Capilaire*. It is pop-

ularly supposed to possess vermifuge properties.

ADIANTUM ÆTHIOPICUM. A plant which grows in the southern part of Africa an infusion of which is much used in coughs and pectoral complaints.

ADIANTUM ALBUM. Spleenwort.

ADIANTUM CAPILLUS VENERIS. A European plant used in the manufacture of the syrup sold under the name of Syrup de Capillars.

ADIANTUM PEDATUM. American Maidenhair. Canada Maidenhair. This is also sometimes used in the manufacture of Capillaire, and has had something of a reputation as in coughs, colds, asthma, hoarseness, and other difficulties of the chest, but its real value has never been established.

[To BE CONTINUED.]

Obituary.

DIED:

At his residence in Cincinuati, after an illness of several weeks, two of which he was confined to his bed, on Friday the 7th of September, 1869, Dr. Francis D. Hill, in the 39th year of his age.

FRANCIS D. HILL, M. D., was the fourth son and the eighth child of the Rev. Isaac Hill, a Presbyterian clergyman well known throughout the West. Dr. Hill was born November 4th, 1821, in Sulivan county, Indiana. In 1828 his father's family moved into Clark county, Ind., where he attended the county school winters, and worked at farming summers, thus forming habits of industry and mental culture at the same time.

In the winters of 1847-8 and 1848-9 he attended medical lectures in Cincinnati, where he graduated on the 26th of Feb., 1849. He also attended lectures in the Jefferson Medical College at Philadelphia during the winter of 1852-3. He was appointed Prof. of Surgery in the American Medical College at Cincinnati in 1856, but did not deliver any lectures.

His oldest brother had a Drug Store in Cincinnati, for whom he acted as assistant, and at the death of that brother he took charge of the business. In 1850 he sold out on Broadway and moved to Fifth street, where his store was burned the following year, but in a few months he started business again in company with his brother Hiram, at the corner of Fifth and Race streets, where he remained in business until his death.

In the year 1854 Dr. Hill was married to a Miss Woodruff, a daughter of Jonathan Woodruff, an old resident of Cincinnati.

During the ten years of his active attention to the Drug business, he established and sustained a character eminent for honesty and integrity, winning the lasting friendship and confidence of all with whom he came in contact, and sustaining his own reputation entirely above the shadow of suspicion, maintaining the character of the articles he manufactured in spite of the recklessness and dishonesty of those who forced spurious preparations on the market. For doing this he won and deserved the gratitude of the profession and of humanity.

In his professional, his mercantile, and his social relations, Dr. Hill had few equals and perhaps no superiors, and his death was a loss to the world it seems difficult to repair.

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YELLOW FEVER.

BY THE EDITOR.

In many important regards yellow fever bears such close relationship to the diseases that are included in the preceding pages under the general head of Remittent fever,—Bilious fever, Congestive fever, etc., as to lead it to be considered but a variety of this form of miasmatic fever. But, notwithstanding this close relationship of cause, of symptoms, and even of treatment,—in some regards it differs from all other forms of fever, so that it seems proper to treat it as a disease distinct and seperate from others.

Yellow Fever is caused, without any doubt, by a miasm generated by the decomposition of organic matter in a peculiar condition and under the combined influences of high heat, moisture, and exposure to the atmosphere. It is never met with except where there is a combination of these influences to generate the producing cause.

It has been said that yellow fever is confined within certain geographical limits, but such statements must be taken with considerable allowance, for, certainly, the disease formerly prevailed in certain localities that have been free from any visitation of it for years, while other localities within the geographical limits of its almost annual visitation have never been ravaged by it.

From the report of Prof. E. H. Barton to the Sanitary Commission of New Orleans, and from other evidences, it now appears to be fully established that yellow fever has never originated in any place except where there has been a disturbance of the original soil, as on digging a canal, building an embankment, changing the grade of a street, filling a depression, or leveling a hill, or prehaps clearing out a canal or basin. As the

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idea that such disturbances of the soil as are here refered to are necessary for the production of yellow fever has not obtained as generally as seems necessary for the protection of humanity against the ravages of this fell disease, a little space may well be alloted to a brief reference to a few of the historical data on which the idea is based.

A wharf was being built at Natches of fresh earth just before the fever of 1825. In 1838 some of the streets of Natches were graded down four or five feet, and a terrible fever followed. In 1839 the fever again prevailed in Natches along the line of the newly constructed railroad from that city to Jackson. The town of Washington, through which the road passed, suffered very severely.

In 1827 there were several new streets opened at Baton Rouge, and yellow fever followed in a very severe epidemic. About the same time the levee at Donalson was built and several ditches dug, the earth from which was spread upon the streets, and yellow fever appeared as an epidemic. When the Mexican Gulf Railroad was built, much original soil and swamp mud was exposed to the sun at Terre Aux Beuf, and this fever followed, producing great mortality.

As early as 1802 when the streets of Wilmington, Delaware, were graded, the yellow fever followed and nearly depopulated the city. In 1819 a canal was dug near the town of Columbia, S. C., and the digging was followed with a very great increase of this fever. In from 1817 to 1820, the City Council of Savannah, Georgia, had many of the streets of that city graded, and during each of these years the disease prevailed with very great severity. In 1854 the fever broke out with great severity, and the first cases appeared in the neighborhood of some streets and a square that had been filled up above the level of the lots adjoining.

The great epidemics of Philadelphia in 1793, and 1797-8, when the disease appeared to be strangely fatal, followed immediately after changes had been made in the level of the soil, in grading the streets, filling the wharfs, etc. Other visitations of this fever in that city can be traced to the same cause.

Yellow fever has appeared in New York and Boston, but only after similar disturbances of the soil. The recent appearance of

the disease at Fort Hamilton near New York, followed the grading down of a hill, the earth from which was thrown into a neighboring swamp. At Norfolk, Va. the level earth of the neighborhood had been drained by numerous ditches, the soil brought into cultivation as vegetable gardens, and the streets and lots in part filled up—and a fearful epidemic followed. Even on plantations where the original soil has been moved, by digging canals, building roads, or otherwise, such changes have been followed by a frightful mortality both among the blacks and the whites.

The infected district at Norfolk was confined to a space of about three hundred yards in width, mostly where earth had been deposited to grade the lots and streets up to the level of the city. The same has often been the case in Charleston and Savannah. This condition of the local origin of the fever has been so well understood by the inhabitants of various localities, that the "infected districts," as they have been called, have been fenced in, as certain springs in the West have been fenced in to prevent cattle from being attacked with milk sickness.

In many instances, the filthiness of the houses, or the accmulation of various matters in lanes or narrow and unventilated places, and even the decomposition of the bilge-water in the holds of vessels, have appeared to be the *originating* cause, or one of the originating causes of the spontaneous appearance of yellow fever; but the instances are so very few where the disease has thus occurred and no reported exposure of the soil has also aided its production, while all the other conditions so frequently obtain an no yellow fever is produced, that the necessity of this condition as regards the soil may be considered as fully established.

It should not be forgotten, that, while an exposure of the original soil to the combined action of the sun's heat and the atmosphere is an essential element in that form of miasm which produces yellow fever, other elements are also necessary to perfect the combination.

A high temperature seems to be absolutely necessary to the production of yellow fever, and hence it is peculiarly a disease of tropical regions and of the summer season. It has never made its appearance until the season has become sufficiently far advan-

ced to cause a very considerable degree of heat in the atmosphere and in the surface of the earth. A very high degree of artificial heat, acting upon a limited portion of the atmosphere, as that confined within the walls of the room, or the wards of a hospital, has appeared to destroy the miasm that causes yellow fever,—but perhaps by producing other changes in the air than the resulting change of temperature; and all observation has proved that cold, or a smart frost, has produced, invariably, such a change in the miasm that it cannot longer cause this disease. A high degree of heat seems essential to produce those changes in the exposed soil that are necessary to the propogation of the miasm of yellow fever and its diffusion through the atmosphere, and a change of temperature with a frost seems always to put a stop to the formation of more of the miasm, and also to destroy that already produced and diffused through the air.

Another condition necessary to obtain for the production of the missm of yellow fever, is, a certain amount of moisture in the atmosphere and in the exposed soil. This and other forms of malignant fever do not occur even in the tropics, unless in regions where there is a considerable amount of humidity. Yellow fever has, as far as observations bearing upon that point have been made, always been preceded or accompanied with an unusual amount of moisture in the atmosphere of the locality where it prevails. The hot, dry, or sandy and desert regions, have never been visited with this fever; and a hot, firey, drying blast puts an end to it or any of the fevers, as that on the coast of Africa, that sets in with or after the rainy season: and such winds, although they blast vegetation, are hoped for by the fever-scorched invalid and his friends in that part of the world, the same as the autumnal frosts are hoped for in New Orleans. In many places in hot countries, the residents have adopted the practice of keeping a fire always burning in their houses during the hottest part of the year. Voyagers who have kept their ships dry and well ventilated by means of fires, have been able to preserve the health of the crews, even during long stays in the equatorial regions.

The causes that tend to the production and the propogation of yellow fever may be briefly sumed up to be:—An exposure of a

considerable amount of original soil to the influences of high heat, to the atmosphere, and to moisture; a high dew-point of the atmosphere; stagnation of the air, close rooms, and the perspiration of the sick being allowed to remain on the patient.

For the propogation of the disease from person to person, several of the conditions mentioned, and particularly that of humidity of the atmosphere, seem to be absolutely necessary. It is a law, whose workings extend to all persons and under all conditions,—that materials which once entered into the organism and have escaped from the body, are of no farther use for life purposes to the being which has execreted them, or to other beings of a similar organization. It is a law of matter, that compound chemical bodies tend to reproduce and multiply themselves out of any collection of materials which furnish the atomic constituents of such compound bodies.

The gaseous emanations from the body of one sick with the yellow fever are very profuse, and of such penetrating and offensive odor that many physicians have said they could form a certain diagnosis of the disease by the sense of smell alone. It is but natural to suppose that such emanations are sufficient to contaminate a large amount of atmosphere and thus render it capable of infecting any susceptible persons within its influence, provided that such atmosphere is warm enough and moist enough to retain the yellow fever fomites unchanged.

But it seems to be fully established that this formidable disease is not contageous in the sense that measles or small-pox are contageous or infectious, and that it cannot be communicated from one person to another, except the atmosphere is in such a state of moisture and warmth as will lead to its preservation and transmission unchanged.

The means of preventing the appearance of this disease and of limiting its spread and continuance in any locality after it has once appeared, must be obvious from its nature and cause and the laws of its propogation, but however important and interesting, this is not the place for their farther elucidation.

The Symptoms of yellow fever, like the symptoms of most diseases, are considerably varied and modified by the intensity of the attack, the number of the vital organs involved in the dis-

ease, the embarrassment and derangement of such organs, the peculiarity of the patient in regard to general health, habits, vital stamina, occupation, and the innumerable other conditions which while in health cause each individual person to differ from the persons who surrounds him or with whom he is associated. The symptoms also vary at different places and at different times in the same place, from a difference in the concentration or intensity of the cause of the disease, the temperature of the locality or season, the peculiar condition of the atmosphere particularly as regards humidity, as well as other local modifying influences. For these reasons, no unvaring picture of the disease, and no enumeration of unvaring symptoms can be given. But some apparently pathognomonic signs can be pointed out, and the outlines of the disease can be sketched with sufficient accuracy to allow of its being readily recognizable.

Like the Remittent variety of fever which this disease closely resembles in many important particulars, yellow fever has been divided into the Common form, where the reaction from the paroxysm is marked and decided, and the *Congestive* form where the reaction does not occur, or can be observed only in a slight degree.

Usually an attack of yellow fever is felt either in the after part of the day, in the evening, or during the night, coming on abruptly and without any premonitory symptoms. The patient seems almost instantly to be struck down, and to sink almost immediately into a state of quite profound coma. At times, although rarely, the patient may have suffered for several days from distress at the stomach, from constipation, from general depression of the vital forces, pain in the head, etc., but these premonitory symptoms are quite unusual.

The attack is commonly accompanied with a sense of chilliness alternating with flushes of heat, or perhaps with an ague fit like that of intermittent fever. In some of the more severe epidemics the chilly stage is entirely absent. The alternations of chills and heat, when present, do not continue long, but the fever is constantly present during the whole day, but more intense in the evening and night than during the fore part of the day. While the alternations of fever and partial remission are still observa-

ble, the pulse is usually quick, firm, and tense; and during the hight of the fever, full and strong, with from eighty-five to an hundred and twenty beats in a minute. In those more malignant attacks where the system reacts but slightly if at all, the pulse is feeble, soft, compressible, and perhaps can scarcely be felt. In those cases that are very malignant, where the patient sinks into a state of stupor, coma, or collapse,—there still may be violent throbbings at the temporal arteries while there is no perceptible pulsation at the wrists.

The skir from the first paroxysm, becomes hot, dry, pungent, and harsh to the touch while there is febrile excitement, but dry, or slightly moist, flabby, and cold over the extremities while the body and particularly over the liver, stomach, and spleen, remains warm, perhaps hot.

The face during the febrile excitement, is usually flushed or turgid and purplish, but pale during the cold stage. The eyes are slightly watery, with the arteries filled with blood, swollen, and irritating the evelids as from grains of sand. Sometimes the ball of the eye appears quite covered with distended blood-vessels, or they may appear like those of a person who has been greatly intoxicated for several days. A symptom that has been so prominent and so common as to be considered by some as pathoguomonic of the disease, as well as premonitory to its attack, is a pain over the orbit of the eyes. This has been felt several days before the advent of the fever. During the febrile exascerbations there is an apparent excitation of the capillary blood-vessels around the eyes, giving them a peculiar scarlet-red look, like those of a person who has just awakened from sleep and has rubbed his eyes with his knuckles. There is no perceptible increase in the flow of tears even while the balls of the eyes are intensely red from capillary injection.

Sometimes a peculiar rash may be observed upon the chest and abdomen, which rash may also extend to the legs and arms; but this appearance of rash is by no means constant or uniform.

After the second or third day the surface has in some cases appeared to have a purplish-scarlet flush, as if the arterial and venous blood was mixed in the minute cutaneous capillaries. Even when this condition of the skin is not very notable it may be

detected by pressing the hand lightly but for some little time to the surface until the pressure has removed the blood from the cutaneous vessels, and then removing the hand and observing the difference in the color of the surface where the skin is not congested and the surrounding surface where the congestion continues, giving a distinct view of the impression of the hand. The amount of capillary congestion of the skin and consequent change in the color varies greatly in different cases, but is nearly always present in some degree. This cutaneous capillary congestion is supposed to be indicative of the favorable fact that the important internal organs are escaping that congestion which frequently puts a fatal termination to the disease. After the flush of the surface has continued two or more days, the skin becomes cool, moist, with perhaps an occasional sweat blister.

Sometimes the flush of the surface disappears at the end of the first paroxysm, or after one or two days. At other times a profuse perspiration breaks out which continues two or three days. Again, the skin from the first may be pale, cool, and dry, with no apparent excitability of the cutaneous capillaries.

The patient, as has been stated, usually experiences acute pain above the orbit of the eyes, shooting from one temple to the other, and sometimes, but rarely, extending to the upper part of the forehead and even to the back part of the head. This cephalic pain is quite constant, and one of the most distressing symptoms of the disease. As the fever progresses it gradually subsides. Pain of an intense character is also frequently felt in the spine, the loins, the hips, and knees. In some cases there is felt no-actual pain in the joints, and even in the head, but in place of it a sense of heaviness, weight, and stupefaction.

During several days before the attack of yellow fever, the tongue has been observed to be covered with minute red points, but at the attack and for a few days thereafter it is moist, and covered on the top with a thin white and delicate fur, while the sides and tip are red. The throat is sometimes so sore as to make the act of swallowing somewhat difficult and painful.

As soon as the disease sets in there is felt an uneasiness of the stomach, often amounting to nausea, and not seldom vomiting. The stomach seems distended, and is usually, but not always, painful upon pressure. It is irritable, and drinks or food frequently increase the nausea and are almost immediately thrown up after they are swallowed. The distress and derangement of the stomach become more marked after one or two days, and are then quite prominent and troublesome.

Within from twenty-four to forty-eight hours after the attack, the patient experiences a sensation of intense burning at the pit of the stomach, or of tightness and tension there. The tenderness on pressure becomes very great, the irritability of the stomach increases and becomes quite annoying to both patient and physician, leading to the vomiting of drinks, food, and medicine;—even when nothing has been swallowed, vomiting will occur with an ejection of any substance that has been taken together with a glairy, greenish, very bitter mucus. In the milder cases bile is often thrown up. The efforts of vomiting are very severe and painful.

The matter vomited, during the first days, have been proved to be alkaline, but as the disease progresses and the system becomes oxidized and the tissues inflamed, they are acid until convalescense commences. When the fluid becomes acid it is pale, nearly limpid, and clear; and this may be the appearance of the fluid dejected until the disease terminates, or, as is more commonly the case, what is called the "black vomit" may take its place.

As the disease progresses, the distress, nausea, and retching of the stomach continues, but the vomiting is less frequent, yet the irritability of the stomach remains, so that everything swallowed is immediately ejected. But when the paroxysms of vomiting do occur there is more matter thrown up and a sense of relief is experienced. The matter vomited is ejected with considerable force, and often to a distance. When the disease is quite grave and formidable, the matter thrown up is brown or black, with black bodies or particles floating in it, so that the vomit looks like coffee with a large quantity of grounds floating in the serous fluid. Sometimes grumous blood, dissolved and in clots, can be discerned in the fluid vomited. This fluid is quite acrid, rendering the throat, tongue, and lips quite tender, and excoriating them, and thus causing a peculiar but very distressing condition.

The "black vomit" has a granular or laminated sediment of a very dark brown or even jet black color, which sediment appears to consist of broken-down blood-cells and perhaps of albumen. This is markedly acid, and the sediment causes liquid that contains sugar to undergo fermentation. Although the "black vomit" always is acid, it also contains a considerable quantity of ammonia, perhaps the production of breaking up some nitrogenized structure. By many the presence of black vomit is supposed to be an indication that the system has undergone such changes that the disease must have a fatal termination. But instances of patients after the appearance of genuine black vomit, who have, without any doubt, recovered, are recorded, although the proportion of such recoveries is quite small.

The urine becomes quite deficient in quantity, of a dark red color, and frequently deposites a copious sediment on cooling. It is nearly always acid during the first few days, and usually continues so until the bils which may become mixed with it renders it alkaline, or until convalescense commences. The kidneys become affected, their uriniferous ducts dilate, and the albumen of the blood escapes, until an albuminous condition of the urine can almost always to detected after the second or third day. Sometimes this condition ceases suddenly on the establishment of convalescence.

The urine is also deeply tinged with bile; and while the fluid remains transparent the presence of bile in it is by no means to be considered a cause for anxiety. If the urine becomes turbid by means of the many detached epithelial cells that are thrown off from the mucous membrane of the bladder and kidneys, or by the action of the free acid in the urine on the albumen that has escaped from the blood, or upon the mucus discharged from the inflamed mucous membranes,—the turbidity will be confined mainly to the lower portion of the vessel in which the urine has been allowed to stand, while the upper portion of the fluid will be nearly or quite clear. Turbidity of the urine, if much marked, is an unfavorable condition, indicating that the urinary organs have become involved in the disease. But a copious flow of transparent urine, even if quite yellow from the contained bile, is always considered favorable in its indications. If the urine is

clear but scanty, and having an oily look, the indications are decidedly unfavorable.

The bowels, even from the first, are usually quite costive, and so sluggish that they are moved with difficulty, and yet the stools are soft, and owing to the absence of bile in the intestines, they are pale or of a light clay color. As the disease progresses and the contents of the stomach are removed by vomiting, the stools become thinner and more light colored, as thin as cream or even more watery, and have an appearance as if there was pus mixed with them. They may be quite watery and tinged with blood from the first.

In this disease the patient is very restless, moaning, sighing, turning in bed, or even getting up and walking the room; but the mind seldom or never wanders much. A very marked degree of apathy is quite common, with indifference or resignation as to the final termination of the fever; while the patient is inclined to fall into prolonged sleep, from which, when aroused, he starts and declares he is quite well. In the latter stages of the disease when coma is quite common, if the patient is arroused by vomiting or otherwise, he is quite apt to think he is fully restored to health.

Respiration varies very much in different cases, so that it may be said that the state of breathing is in no way pathognomonic. Sometimes the sense of constriction of the thorax is very marked, so that the patient complains of inability to fill his chest. Spasms of the chest are also common. The breathing is sometimes quite slow, sometimes hurried, and in others apparently natural. If the kidneys secrete but little the breath may have the odor of prine.

As has been stated, the attack may be very sudden, and after the preliminary chill, fever supervenes that may continue from two to thirty or more hours, when it will subside never to return with any considerable violence. All parts and organs of the system appear to assume a healthy condition, and the patient feels so well that he frequently proposes to leave his bed with the idea that convalescence has already been established. His skin and eyes become tinged with bile, and if there is at this time a free discharge of bile from the liver and bowels, or a profuse perspiration sets in with a slighter billious discharge from the bowels, usually the course of the disease is broken in upon, and the patient is spedily restored to health.

Very commonly the period of remission is not followed by either a free perspiration or a discharge of bile; but the eyes and skin become quite yellow,—the pit of the stomach is very tender on pressure,—the urine is diminished in quantity and turns yellow, dark brown, or almost black,—the pulse becomes slow, and the patient is inclined to fall into a comatose state.

After another day the pulse may fall quite low, and the circulation through the extremities sometimes almost ceases, even while the heart beats quite briskly. The thirst becomes nearly intolerable, although any drink swallowed is apt to be rejected immediately, the matters vomited being streaked with blood. The tongue is loaded in its centre, tremulous, and protruded with considerable difficulty, while the patient often quite forgets to draw it back into his mouth. The teeth, gums, and lips become covered with sordes mixed with matter vomited from the stomach.

Even when the vomiting has been quite severe and forcible, the symptoms may gradually abate, and recovery eventually follow.

As the disease progresses, the stools change their appearance and seem to be composed of the same matters as those thrown from the stomach, the "black vomit,"—or are of the consistency of molasses or tar. The urine is deficient and quite dark, or suppressed. The skin looses its yellow jaundiced hue and becomes dark,—with black, ink-like spots on the face and chest,—the whole surface assumes a mahogony, bronzed, or purplish hue, like the echymoses following a bruise,—the surface becomes covered with specks or spots resulting from stagnation of the blood within the outaneous capillaries or a rapture of their walls,—the depending parts of the body have large blotches from being filled with blood; and blood oozes out through the mucous surfaces wherever such surfaces are exposed to the oxygen of the air.

All these symptoms become more prominent as the disease advances to a fatal termination. The countenance becomes death-like,—hiccough occurs, with difficulty of swallowing and slow and difficult breathing,—the pulse becomes feeble, intermits,

and fades away,—the bowels are moved without arousing the consciousness of the patient, the stools being dark, and of a death-like smell,—the urine is scanty, dark, bloody, of a strong odor, and voided unconsciously,—gangrene, eschars, carbuncles, and buboes, supervene. There is dimness of vission, loss of speech, insensibility, or perhaps an apparent return of the senses and the intellect, a peculiar odor of the body, with sometimes cold clammy sweats, sometimes convulsions,—and death.

The length of time that elapses, after the invasion of the disease before it results in death or in convalescence varies very much in different cases. Death may occur almost immediately on the attack, or after two or more weeks, but usually, if fatal, the disease terminates in from three to ten days. Convalescence may commence after the first paroxysm and progress quite rapidly, or it may be delayed for several weeks; but is never as tardy as remittent fever. Relapses are much more common in some epidemics than in others, and the relapse may be repeated one or more times, but they do not often occur after the patient has thrown up the "black vomit."

The peculiar symptoms that appear to be directly connected with marked cases of yellow fever independant of the special causes or conditions of the patient, or otherwise, that modify the manifestations, may be briefly summed up as follows; -- A chill, followed by a high grade of fever; with quick, frequent, full, and strong pulse; hot, dry, skin; throbbing at the temples; flushed face, of an arterial crimson color and peculiar appearance; red, blood-shot, congested eyeballs and eyelids, with the eyes watery. shining, and sore, or lame; severe pain across the forehead, and in the back, thighs, and legs; the tongue covered with fur on the top, with red edges and tip; a sense of intense pain at the pit of the stomach; nausea, retching and vomiting of greenish, bitter mucus, of nearly pure bile, and of coffee grounds and "black vomit;" scanty, high colored, albuminious, urine, with a copious sedement; costiveness, or rather torpidity of the bowels, with soft, creamy, or purulent stools; uneasiness, and restlessness.

This condition usually lasts from two to three days, when there is a deceitful remission of all the symptoms for a day or more, followed by great prostration, and slow, irregular, depressed pulse;

tongue covered with a brown coat, swellen, moist, or dry, chapped, and bloody; sordes on the lips, cheeks, gums, teeth, and tongue, and even in the nostrils; great and unquenehable thirst; severe pain at the pit of the stomach, with spontaneous and forcible vomiting of brown, black, or coffee-like fluid and "black vomit;" a discharge of dark, offensive, tar-like matter from the bowels; yellowness of the skin, first about the eyes and across the forehead, the face, cheet, and body, and limbs, growing deeper and becoming dusky, brown, mahogony, and bronze colored; an apathetic state of the mind; hemorrhages; and general indications of decomposition,—with death. Very seldom depatients recover after having passed into the second stage.

But almost every variety and amount of variation from the symptoms above enumerated, are observed; and the peculiar form of the disease has often received a distinctive name or title, or grade. The agravated grade, the obscure grade, the gastric grade, the typhoid grade, the walking grade, apoplectic grade, the uramic grade, the hemorrhagic grade, and various other grades have been named and described by different writers.

Treatment.—Although each case of yellow fever requires its own peculiar modification of the treatment in accordance with the peculiarities of the patient or of surrounding circumstances, yet the disease itself demands special medication to remove its specific producing cause, and the special abnormal conditions produced thereby. The specific medication refered to has reference to a speedy and complete removal of the cause and products of the disease from the system.

As in the treatment of other forms of miasmatic fever, the system needs first to be placed in a condition that will enable it to receive the specific medication; and during treatment, all parts of the organism must be protected from the ravages of the disease, and relieved from any embarassments or derangements produced thereby as speedily and as completely as possible, and convalescence and restoration to health promoted by all needful means.

Dr. Porcher, of Charleston, S. C., who has had his full share in the treatment of yellow fever, recommends immediate and powerful revulsion over the spine and the region of the stomach and

hiver and spleen by means of mustard applications, at once, and repeated once in two or three hours for several days, or as long as there is any tendency to nausea and vomiting. He is particular to say that he has no fear from the repeated irritation of mustard applications, but considers their use of the utmost importance.

Along with the application of mustard to the spine and epigastrium, he also reccommends sponging the head with cold water. I should prefer the use of water either cold or warm, but of such temperature as proves most agreeable to the patient, the surface to be wet and evaporation promoted by fanning. The application of water to the head should be continued as long as there is heat or pain in that region, and repeated when the pain or heat returns.

Along with these early applications, attention must be given to thorough and free ventilation so as to insure a plentiful supply of pure air, and cautiously guarding the patient from all disturbing influences. The patient should be kept quiet in bed, and as soon as possible, even before the stomach is fully quieted, the great febrile excitement of the first paroxysm of the disease must if possible be allayed by means of those special sedatives that control the action of the heart and the arteries.

I had published some papers on the therapeutical properties of the tincture of Gelseminum sempervirens, and my views were endorsed by Dr. Mayes of South Carolina, which led Drs. White and Ford to make a trial of that agent in the yellow fever epidemic in Charleston in 1858.

Drs. White and Ford, in their Report, say:—"In view of the results obtained from a reduction of the pulse in the treatment of the fever as observed under the use of *veratrum*, and in order to contrast with this drug, another remedy possessing similar powers, at the suggestion of Dr. White, we also used in the present epidemic, the tincture of Gelseminum sempervirens, which was prepared after the following formula:—

Rad. Gelsem, semp., 3 iv Alcohol. (95 per cent,) Aq. com. āā f3viij.

M. and digest fourteen days and then filter.

"The initial doses of this tincture were, for adults, from twenty to thirty drops—and for children from five to twenty drops, every

hour for the first four hours, and the secondary doses half as large. "Certain cases which had been seen late, or had been characterized by notable irritability of the stomach, as also some which showed no special malignity, were treated with this agent with marked advantage. From notes taken upon cases thus treated, we have deduced the following numbers:

"Total number treated with gelseminun sempervirens, twenty-four, all of which recovered. Of these fifteen were males, and nine females. Adults, twelve, and children, twelve; whites twenty-two, and blacks two; natives of Charleston ten; South Carolina, five; Ireland, seven; Germany, two.

Ī	Average Frequency of Pulse.		Adult Females, Beats per M.	
	When first given. 12 hours afterwards.	112. 4 55. 4	101. 3 54. 6	122. 2 70. 9

"Of the whole munber treated, (24) two vomited black vomit, five passed black vomit downwards. In three cases hemorrhage occurred from the tongue, gums, or nasal passages. One woman was in the sixth month of pregnancy and did not abort.

Average Duration of Treatment.	Adult Males. 7. 2 Days.	Adult Females. 9. 3 Days.	Children. 8.5 Days.
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"No marked prostration was produced by this remedy. The pulse being, however, much less quickly reduced than by veratrum. In few cases was the heart's action fully lowered in less than twelve hours, and it was well controlled throughout the rest of the disease in the majority of cases.

"The gelseminum appeared to produce a general calming influence even during the early period of its administration, but was not found to possess any marked narcotic properties. It seemed, also, to promote the action of the kidneys, and during its use only, in several cases, an erythema of the skin was noticed. This drug appeared to influence the volume of the pulse before it affected its frequency; and in most cases, for the rest of the disease, to control both conditions in an equal manner. Emesis was not observed to ensue upon the administration of this medicine; the gastric irritability peculiar to the disease being moreover, to all appearance favorably influenced.

"The total number of cases of yellow fever treated with a slow pulse by veratrum viride and gelseminum sempervirens, was, conjointly, one hundred and forty-one, of whom fifteen died and one hundred and twenty-four recovered.

"Total number of cases treated by ordinary methods was six, of whom three died, and three recovered."

Those who are familliar with the therapeutic action and uses of the tineture of gelseminum will readily perceive its peculiar and special value in the treatment of yellow fever, where the gastric irritability, the nausea, and vomiting, are frequently so severe as greatly to interfere with the use of ordinary remedial measures. Gelseminum, by many, has been supposed nearly if not quite as potent an antagonist or destructive agent to miasm, and particularly to that form of miasm which produces remittent and yellow fevers, as quinia is to the miasm that produces ague. Whatever may be finally determined in regard to gelseminum as an antagonist to the producing cause of fever, it has always been found an admirable sedative to the action of the heart and arteries, and thus to control febrile excitements without producing debility, or in any way ultimately diminishing the vital forces of those to whom it has been administered.

The use of gelseminum in New Orleans, and other places, in the treatment of yellow fever, has fully confirmed the favorable report of Drs. White and Ford; and from its first introduction into practice as a remedy for the miasmatic fever of the South, when it proved so wonderfully efficacious, its repeated use in dysenteric epidemics, and its more recent administration in the city of Brooklyn and elsewhere, as a substitute for quinia as an antimiasmatic in ague,—it has always shown itself possessed of therapeutical properties which seem of special utility in yellow fever. These facts, together with the very favorable results obtained from its use for three years past, makes it proper that further trial of it be specially and urgently recommended.

As soon as the action of the external use of the mustard and the internal use of gelseminum has prepared the system so as to receive it, *sulphate of quinia* should be given, in doses of from ten to twenty grains, followed quite soon with the same amount of calcined magnesia. The quinia may be repeated once in from

one to four hours as long as it appears to be needed, and the calcined magnesia may also be repeated once in four hours until the bowels are moved by it.

After the bowels have been moved, an effervescing draught of carbonate of magnesia and citric acid, or lemon juice,—repeated as often as the patient requires, will be found to be very pleasant, to allay nausea, and to act as a diaphoretic and as an antiseptic to the blood and tissues, preventing congestions and promoting a free discharge of urine.

The application of the mustard to the spine, the stomach, and the extremities, may be continued for several days; and be again resorted to at any time thereafter when its action is demanded.

After the bowels have been emptied once or twice with mild doses of calcined magnesia, small, or laxitive doses may be needed occasionly during the course of the disease and during convalescence; but as a general thing, after the first, any purgative medication, certainly any drastic purgation, must prove decidedly hurtful and perhaps fatal in its tendency. An occasional very mild injection may be resorted to if the bowels will not move of themselves. The use of active purgatives and other depressing agents, in this disease, cannot be to studiously avoided. Even those who have supposed bleeding, emetics, and cathartics, to be absolutely necessary in the treatment of yellow fever, have insisted upon the dangers that attend their use, and have recognised the fact that "we should never loose sight of the imperative necessity of husbanding the strength of the patient, and of avoiding everything calculated to depress the powers of life and foster the tendency to collapse."

From the first and during the entire course of the disease, the use of the sulphate of quinia must be kept up,—or, perhaps, the sulphate of cinchonia or quinidia may take its place. Salicine, also, and other bitter tonics may be used during the convalescence with great advantage. Tonics and aromatics will always promote the final restoration to health.

The cautious use of the sulphate of manganese, the extract of dandelion, the prepared ox-gall, or other agents of well known power to favor the discharge of bile from obstructed gall-ducts,

and thus free the mucous membrane, the tissues, and the skin from the bile that has found lodgement in them and given them their jaundiced hue, will be found very valuable. The liver does not need to be stimulated to an increased secretion of bile, for the secretion of that fluid is excessive in all cases of yellow fever, but the elimination is obstructed, and that obstruction should be removed. The tincture of gelseminum answers this purpose admirably.

When there is much prostration and hemorrhage from the outlets of the body, and the patient is sinking into the typhoid condition,—the oil of turpentine, ammonia, creosote, or the muriated tincture of iron, may be used with benefit.

In the management of a case of this disease, in addition to the careful avoidance of all bleeding, or weekening, or irritating agents, all dirastic cathartics, and the use of calomel in any quantities;—all impressions of a mental or moral kind that depress or debilitate must also be avoided. The natural alarm and anxiety of the patient must be appeased as far as possible, and all injudicious and excited friends and relatives carefully excluded. This is quite as important as it is to adopt the proper remedial measures.

During the first few days, nearly entire abstinence from food must be enjoined. Then a little arrow-root, sago, pearl-barley, or oatmeal gruel may be allowed in quite small quantities at first. After a few days, broth from meat carefully divested of its fat, soups made of similar meat and a little of the vegetables named, with sago, mush, thin panada, and tea or coffee, given in very small quantities and after brief intervals. The quantity and variety may be gradually and cautiously increased, including beef-tea, jelly, chicken broth, mutton, or veal, with the flesh of wild game when it can be obtained, eggs, oysters, and fish. Along with the food, the aromatics and bitters must not be neglected.

Pure air, perfect cleanliness of person and of clothing, quiet and cheerfulness of mind, rest, sleep, and entire exclusion from anxiety, care, and business,—will hasten convalescence, which is at times quiet tedious and protracted, and somewhat liable to a relapse.

INVESTIGATIONS CONCERNING HYDROPHOBIA.

From a series of returns made upon this subject, from different departments in France, during several years, and epitomized by Dr. Tardieu, in the *Annales d'Hygiene Publique*, we glean some interesting information upon the following points:—

- I. The Species of Animal by which the Hydrophobia was sommunicated.—Out of a total of 228 cases in which reference was made to this point, 188 were stated to have been produced by the bite of a dog, 13 by that of a cat, 26 by a wolf, and 1 by the bite of a fox. In two cases in which the bite of a cat produced the disease, one animal is reported to have beceme rabid in consequence of an extensive burn, another owing to its having been robbed of its young. These cases are of considerable interest as they tend to resolve the still doubtful question of the spontaneous dvelopment of hydrophobia in other species of animals than the canine.
- II. The season of the year at which this disorder is most developed.—This circumstance was noted in 181 cases, 110 of which occured during the hot seasons of the year, 71 only during the cold. There is, doubtless, a marked difference in favor of the months in which the temperature is most elevated, but it does not remain a less constant fact that no season is really opposed to the development of hydrophobia, or can render its effects less formidable.
- III. The average number of persons who escaped the malady after being bitten.—On this point we have the records of 198 cases of persons who were bitten, in many instances by the same animal; of these, 112 were subsequently seized with hydrophobia, whilst the remaining 86 experienced no ill effects. We need scarcely remark that numerous adventitious circumstances, such as the interposition of an article of clothing to which the saliva of the rabid animal might adhere, the state of the patient's mind or health after the injury, etc., would considerably influence the results in this particular.
- IV. The length of the stage of Incubation.—In a large majority of cases this was not more than a few weeks. Out of 147 cases referred to, the period of incubation was under a month in 29, more than a month but under three months in 93 cases, whilst

in the remainder the length of time occupied was from six to twelve months. The incubatory period appeared shorter in very young persons than at any other age.

- V. The length of time between the development of the disease and its fatal Termination.—On this point the statistics collected corroborate too fully the preconceived ideas as to the rapid progress of the disorder. Out of 161 cases death put an end, within a week, to the horrible sufferings of the patients in 158; more than one half of that number being within four days, even, from the time at which the malady first manifested itself.
- VI. The relative effect of the means employed to prevent the development of Hydrophobia.—Upon this all-important portion of the subject Dr. Tardieu observes that the fast cannot be too strongly insisted upon, that the only hopes of security from the fatal effects of this dreadful disease consist in immediate cauterization with the red-hot iron, and that every other method only compromises the future safety of the patient by the irreparable loss of the only moments during which the preventive treatment is applicable.
- VII. Curative treatment of Hydrophobia when it has become developed.—Dr. Tardieu makes the disheartening statement that of all the remedies which have as yet been suggested, chloroform included, for the treatment of hydrophobia when fully developed, he has found none to have been attended with sufficiently promising results to enable him definitely to say that it will effect a cure.—London Medical Review.

BOOKS, PAMPHLETS, ETC.

S. S. & W. Wood of New York, the well known Medical Book Publishers, have sent, through Rickey, Mallory & Co., the sixth edition of Prof. Bedford's, *Clinical Lectures on the diseases* of Women und Children first published in the Northern Lancet.

Notwithstanding the manner in which the book was first received by the medical press of this country, and the objectionably flippant and even vulgar manner in which the Lecturer is reported to have treated important scientific and humanitary subjects, these lectures have always proved exceedingly popular, and the

sixth edition of the book has been called for in about five years from the first publication.

The present edition is said to be carefully revised, and yet not a word of change appears to have been made in the Lectures up to the thirty second, or in about seven eighths of the entire volume. The two following Lectures are not in the fourth edition. There are also added a few formulæ, which may be found useful as hints or reminders to practitioners.

The profession may be benefitted by the teachings of those who adopt a low and vulgar style and method for imparting scientific information, but, certainly, a more elevated course of instruction should prove equally beneficial.

This volume has received, and deserves, high commendation for its graphic descriptions of diseases peculiar to women and children, and will always be read with interest, especially by those somewhat inexperienced in the practice of medicine.

Dr. Resin Thompson, of Nashville, Tenn. after an experience of over thirty years in the practice of medicine, gave his opinions in regard to the nature and treatment of Fever in the form of Lectures and Essays; which he afterwards embodied in a small volume, the third edition, under the title of A Treuttse on Fever he has sent to the Journal of Rational Medicine.

Without endorsing all the views of Dr. Thompson, either as to the cause or treatment of fever, I feel privileged to express the opinion that the teachings of this book are decidedly in advance of the profession, and that the author has proved himself to be a deep thinker, and an earnest, honest man. His book can be read with great benefit.

A. Dallas, C. H., C. M., has sent his Outlines of Chemico—Hygiene and Medicine, which has been carefully read. The book was written with the best of intentions, but I think must prove at least a partial failure, for well informed physicians do not need it, and the people, for whom it seems to have been specially written will not read it. It is full of scientific facts, the direct application of which, to the preservation of health or the cure of disease, cannot be readily appreciated.

Last year, Gould and Lincoln of Boston, published a volume of

Lectures on Metaphysics, by Sir. William Hamilton, Prof. of Logic and Metaphysics in the University of Edinburgh. They have now sent the Second Volume of Lectures, on Logic, through Geo. S. Blanchard, Bookseller, of this city.

More than twenty years ago, Sir. William Hamilton was elected to a Professorship in the University of Edinburgh, when he commenced preparations to lecture on the subjects of his chair. His course of preparatory reading prevented his occupying the necessary time to write his course of lectures before he commenced to deliver them, and most of his lectures were written but a day or two before delivery. Often they were not finished until the evening previous to their being pronounced to his class; and hence they were somewhat disconnected, and not as complete as the author wished.

But, as incomplete as those lectures always appeared to their author, those who were fortunate enough to hear them appreciated them and esteemed them more highly than any that had previously been delivered in Great Britian, and they gave an impetus to the study of Metaphysics and Logic, greater than anything that had then been written or spoken in the English tongue.

This second volume, is confined to Logic, its definition, utility, and nature,—pure, and modified, and the doctrines of Truth and Error, together with an Appendix containing various papers that were not fully incorporated into the text of the lectures.

These lectures, although delivered immediately after they were written, were elaborated and improved year by year, until they gradually assumed their present form.

Physicians are often so closely confined to the routine of their daily practice that they find it inconvenient to pay much attention to purely philosophical discussions, but in this, and particularly in the volume on Metaphysics, they will find many matters having at least an indirect bearing upon the practice of their profession, which they can read with interest and profit.

Dr. Edwin M. Hale associate editor of the North American Journal of Homeopathy has sent a pamphlet on the *Homeopathic Treatment of Abortion*, in which he calls special attention to what he terms the *New Remedies*,—the preperations manufactured by Merrell, Hill, and others. It is deserving careful consideration, and will be read with interest.

ALPHABETICAL NOTES ON MATERIA MEDICA AND THERAPEUTICS.

BY THE EDITOR.

Among the varieties of ferns known under the general name of Adiantum, quite a number have at various times been in use by physicans. Dioscorides and Pliny speak of two kinds under the name of Adianton polytrichon, or A. calitrichon and A. trich-

manes,—the Maidenhair spleenwort of modern botanists.

The herb True Maidenhair is on sale at most of the herb-shops of England, and the Canada Maidenhair is often sold in America; but, although they are officinal in the Prussian and Hamburg Pharmacopæias, and in the French Codex, they appear to be of so little utility that even the syrup called capillaire, is now usually but pure clarified syrup flavored with a little orange-flower water.

Address Acro. An acid discovered by Laurent, by oxidating

oleic acid by means of pure nitric acid.

ADIFOCERE. Adipocere. Grave Wax. Probably first mentioned by Lord Bacon. Produced in buried human bodies, by first changing the muscular tissue to Ammonia, and then saponifying the fat by the action of the ammonia upon it.

ADIPSA. A variety of medicines that lessen or quench thirst,

as the Acids.

ADJUVANT. A medicine used in a prescription to aid the effect or otherwise modify the action of the principle ingredient

of the compound.

Often quite active and useful medicines are used as adjuvants, as well as for their direct action upon the patient, or upon the cause of the disease. Nearly all compounds, where more than two medicines are given in combination, contain some substance whose principle use is that of an adjuvant.

As illustrations of the use of adjuvants, reference may be made to the addition of some aromatic essential oil to cathartic pills,—the addition of aniseed to an infusion of senna leaves,—the addition of laudanum to castor oil,—of ipecacuanha to opium in Dover's

powders, etc., etc.

Administration of Medicines. Very much of the value and efficacy of medicines depends upon the manner of their administra-

tion and the modes of their combination with each other.

Simplicity in the preparation and combination of medicines and their mode of administration is always so desirable that it never should be departed from except for some cogent reason. Two or more remedies should never be combined, or even given alternately, except with a clear and well-defined object, and to subserve a special purpose. Even two or more remedies of the same general character should not be administered in combination, except for the purpose of obtaining from the combination an effect or effects

not likely to be produced by either of the agents when given alone.

But when a variety of indications are to be met, and the agents selected for that purpose can be given in combination without interfering with or modifying the action of each other, it will be better to combine them than by the repetition and alternation of doses, annoy the patient and perhaps produce derangements of the stomach. Tonics may often be combined with almost any other medicines, as purgatives, or emmenagogues, which are needed in chronic cases; anodynes are frequently combined with diaphoretics; alkalies with the resinoid cathartics; and many other combinations may be made with advantage. But in making such combinations great caution must be exercised that the different medicines are not either chemically or physiologically incompatible.

In regard to this matter of incompatibility it is to be feared that there is far too little attention paid by the profession. (See Incompatibility.) In prescribing two or more medicines together, no combination should ever be made without a full knowledge of the results that will follow and a direct reference to such results.

The form in which medicines are given is a matter of no little moment; and by a proper consideration of this matter, especially with reference to the preferences of the patient, we can frequently get our remedies to act favorably, when by neglecting it, the treatment might prove less beneficial, or even, perhaps, absolutely injurious.

Fluids are generally to be preferred to powders or pills, as being more easily given and taken and more easily assimilated by the patient, as well as allowing the dose to be modified more read-

ily than when the medicine is in the solid form.

Medicines act on the system in varying spaces of time, and their difference in that regard should not be lost sight of. To keep the system steadily under the influence of a medicine it is desirable to give it in smaller doses and with more frequent repetitions than are usually recommended. They should be made as little disagreeable to the patient as possible.

The size of the dose must correspond to the age, sex, and condition of the patient. In all treatises the dose named is designed for an adult male, which must be lessened for children, women,

or debilitated persons.

A good rule is:—Give to the patient that portion of a full dose of medicine which corresponds to his or her proportionate weight to an adult male. If a man's weight may be estimated at 150 pounds, and a woman's at 100 pounds, she should have two-thirds of his dose of medicine; a child weighing 15 pounds, one-tenth

of his dose; -one weighing 30 pounds, one-fifth; -and one weigh-

ing 75 pounds, one-half.

Usually, women and children have medicines given them in too large doses, and a remembrance of this rule may tend to correct the evil.

In writing prescriptions, care, order, and precision, as well as neatness, will always characterize the thoughtful and well-educated physician; and accuracy and care should be cultivated as a

habit as well as a duty.

Ordinarily, the medicine of most importance in the prescription should be first named, to be followed by the adjuvant if any is required, and then by the vehicle in which the more active ingredient is ordered to be given. This, however, is by no means to be considered as an invariable rule, as, sometimes it is necessary to indicate to the apothecary the order of succession in which the ingredients should be combined in order to make the mixture perfect.

In writing a prescription, either the full name of the medicine should be written, or so much of the name as shall prevent the possibility of the spothecary mistaking one medicine for another.

(See Abbreviations and Prescrptions.)

ADOLID. A plant, a native of Malabar, the leaves of which are steeped in oil and that oil used for the purpose of facilitating labor

when tardy.

ADEAGANTIN. Arabin. The soluble part or gum of Tragacanth. This is generally considered so similar to gum Arabic that it has been called Arabin, but neither the silicate of potassa, nor the perchloride of iron produce any change in Adragantin, while they do produce notable changes in gum Arabic.

Adulasso. A shrub which grows in India, whose leaves are

used as an external application in gout.

Adulterations in medicine, adulteration consists in debasing, by the admixture of some foreign substance with the agent adulterated. The word is often used as synonymous with Sophistication. Adulterations in medicine, are so very common that very special attention should be made to the matter by all, both those who deal in and dispense medicines, and those who prescribe them. The purity of medicine has been considered a matter of such vast importance as to have led to the enactment of several laws in regard thereto, and to the appointment of special boards of Inspectors of drugs and medicines, in nearly every civilized country; and yet the practice of adulteration with many forms of drugs and medicines is so universal that it is quite rare to find certain kinds of articles in market that are pure.

The attention of the profession is almost continuously being

called to the fact and frequency of adulteration in drugs and medicines, and still the custom obtains, and many have supposed it to be practiced more and more generally each succeeding year.

ÆGAGROPHILA. Bezoar. The ball of hairs found in the stomach of a goat, once used as a medicine, but long since dis-

carded as worthless.

EGRINON. An ointment made from the flowers or fruits of the

black poplar tree.

ÆGYPTIACUM. A mixture of vinegar, honey and verdegris, used as a liniment or ointment, and as an application to foul ulcers.

(See Linamentum Æruginis.)

AGYPTIUS PESSUS. The Egyptian pessary—composed of honey, turpentine, butter, oil of lilly, or of rose, and of saffron, each one part, with an occasional addition of a minute quantity of verdigris.

ÆOLOPILE. A small tin or copper boiler, furnished with a tubular mouth and stop-cock, and heated by means of a spirit lamp to generate steam, to be applied locally as a stimulant,

rubefacient, or even as a caustic.

AER. Air: - which see.

AERATED MAGNESIAN WATER. Water in which the Carbonate of Magnesia is dissolved by the aid of Carbonic acid. It is also known as Solution of Magnesia, and Fluid Magnesia. It has never been much used in the practice of medicine, although a Boston manufacturer made strong endeavors to introduce it into

use some years ago.

Dinneford's Solution was made by taking of Howard's heavy carbonate of magnesia the proportion of 17½ grains, to distilled water 1 fluid ounce, and putting them into a tinned copper vessel, into which carbonic acid, generated by the action of sulphuric acid on whiting, is forced by means of steam power for five and a half hours, during which time the copper vessel is kept revolving. Then the liquid, which is transparent, is drawn off and corked for use.

Various methods have been adopted for manufacturing fuid magnesia, which result in producing a compound similar to the

method of Mr. Dinneford.

This solution of bicarbonate of magnesia is a pleasant alkali, or antacid, and is also slightly laxative. The dose is from a teaspoonful to one fluid ounce, one or more times a day.

AERATED MINERAL ALKALI. Neutral Carbonate of Soda. See

Soda.

AERIFORM MEDICINE. Medicine in the form of air or gas.: Vapors may also be considered aëriform fluids. Both gases and vapors are used in the practice of medicine, (see Gas, and Vapor.) particularly as applied to the surface of the body, and by means of inhalation. (See Inhalation.)

ÆRUGINUS UNGUENTUM. An ointment made as follows:-

Re Superacetate of Lead, 3ij. Water, Oj. Olive Oil, Oss.

M.

Heat, and form an ointment to be spread with a feather upon the part affected, which is immediately to be covered with a linen cloth.

This ointment was highly lauded as an application to burns and scalds by E. G. S. Gaozey, Esq., of Cambrone, England.

ÆRUGO. Sub-acetate of Copper. Impure Sub-acetate of Copper. Verdigris. See Copper, and Verdigris. The rust of any metal, but more particularly of brass, has been known by this name.

Æsculerin One of the proximate principles of the nut of the Horse-chestnut, (Æsculus hippocastanum,) obtained by treating Esculine with dilute sulphuric acid, when that substance is con-

verted into esculetin and grape-sugar.

ÆSCULUS GLABRA. Buckeye. This tree grows spontaneously in many of the Western States, being usually confined to the bottom lands and the borders of streams. The bark of this tree instead of being simply astringent, and antimiasmatic like that of the horse-chestnut, possesses very active narcotic powers, producing a condition resembling inebriation in those who have partaken of it in any form and even from the mere inhalation of it

in a gaseous form.

Cattle are extremely fond of the seeds and shoots. In some cases the first shoots and leaves in the spring produce complete drunkenness on cattle which eat of them. But they generally become intoxicated by eating the nut. It seems that those who have once indulged, return to it as a toper does to his bottle. When the animal is under this narcotic influence, the eye exhibits the same appearance as that of an inebriate. There is considerable auxiety manifested, and when the animal eats enough to overcome the aervous powers he will get down, and should he be helped up he is inclined to get down again and lie on the side he has lain on.

The pounded bark of the green root is used to produce inebriation in fish, by washing the bark at shallow ripples of streams; and when the extractive is thoroughly mixed with water the fish are acted upon by its coming in contact with the gills, which serve the same purpose to a fish that the lungs do to man. About thirty years since, Dr. Wm. B. Crooks, first taught the method of taking fish by "buckeyeing" as it was called. He placed the green

root of the tree in water, and the fish soon became so intoxicated

as to be easily caught.

It is to be expected that this species of Æsculus will yet prove a fine remedial agent where a narcotic is needed. In Griffith's Medical Botany there is an account given of some experiments made by Dr. McDowell. He tried the powder of the rind of the nut in some cases, and states that ten grains of it were equivalent to three grains of opium. A strong decoction of the bark has been recommended as a lotion for gangrenous ulcers. The fruit contains a large quantity of fine starch which is thought to be superior to that made from wheat.

ÆSCULUS HIPPOCASTANUS. The Horse-Chestnut. The bark of this tree, as well as that of the Buck-eye, has attracted considerable attention on the part of the profession, but has not been as generally made use of as its value would seem to demand.

It has repeatedly been proposed by Zannchelle, Voigtel, Hufe-

land, and others, as a substitute for cinchona.

It was so much used during the wars of Napoleon I. in Europe, when cinchona bark was very scarce and could not be obtained. that a preparation of it was made officinal in the Prussian Pharmacopæia. That powder under the name of Pulvis corticis hippocastani compositus was composed of:—

> Horse-Chestnut bark, Willow bark, Red Gentian root. Sweet-flag root, Cloves, āā 3ij,

Mixed and pulverized. Hufeland says this fully answered in

three out of four cases of Intermittents.

Sinogowitz, in Rust's Magazine, recommends that the bark of the horse-chestnut be given, after ague has been cured by quinina to prevent a return of the disease. Krüglestein in the Pharmacopee Universelle, speaks of it as of great value for removing the debility of the digestive organs that follow an attack of the gout. Most of the European Pharmacopeas have formulæ for preparing a watery extract, which has been found useful in checking chronic discharges from the mucous membranes.

It should be borne in mind that the European horse-chestnut is not identical with the Buckeye of America, and that the bark

of the latter cannot well be substituted for the former.

ESTHETICA. Agents that affect the nerves and organs of sen-Those sesthetics that heighten sensation are called hyperæsthetics:—those that lessen sensation are called anæsthetics.

A volatile liquid, obtained by distilling alco-ÆTHER. Ether. hol with a concentrated acid.

ATHEREA. Ethers. There are quite a number of ethers, as already described. They differ considerably in their sensible and therapentical properties, and yet are very closely allied in regard to many important particulars and uses.

They all possess a peculiar fragrant, at first somewhat pungent, odor; are sweet to the taste; very volatile; and inflammable, burning with a flame like that of alcohol. Nearly all of them

are prepared by the action of an acid upon alcohol.

Ethers are of three different kinds, the divisions being in accordance with their chemical composition. $F_n^n rst$. Those that consist of Ethylen and Water. Second. Those composed of an Acid, Ethylen, and of Water; $Th_n^n rd$. Those that are composed of an Acid, and Ethylen, but contain no water in their composition. Of the first kind named, Hydric Ether is used in medicine. Hyponitrous Ether belongs to the second division; and Muriatic Ether belongs to the third kind.

Ethers are so extremely inflamable that they should never be used as medicine in the night time without very great precautions to prevent their coming in contact with burning gas or the flame of a candle or lamp. In the office or shop, they should never be brought near a flame. When not in use, they should be

in ground stoppered bottles, and kept in a cool place.

ÆTHER ACEFICUS. Acetic Ether. Discovered in 1759 by Count Laurdguais. It is very seldom used as a medicine in this country, but on the continent of Europe it has occasionally been employed, as being milder, more agreeable, and more diaphoretic in its action than sulphuric or nitric ethers. It has been employed in nervous and putrid forms of fever, in spasmodic vomiting, and in atony of the alimentary canal. The dose is from thirty drops to a teaspoonful. (See Ether.)

ÆTHER CHLORICUS. Chloroform. Chloric Ether. See Chlo-

roform.

ÆTHER HYDROCHLORICUS. Hydrochloric Ether. Chlorohydric Ether. Marine Ether. Spiritus Salis dulces. Chloride of Ethyle. Gehlen first called the attention of the profession to this medicine in a dissertation published in 1804. It is prepared by saturating alcohol with hydrochloric acid gas and distilling into a cooled receiver by means of a water-bath.

It is a very diffusible stimulant, and hence useful as an antispasmodic, although its great volatility and diffusibility has generally prevented it from being employed except in combination with other agents. Under the name of Spirit of Muriatic Ether, made by adding one part of muriatic acid to three parts of rectified spirits, digesting for three days, and then distilled by means of a sand-bath, it has been used in dyspepsia, in obstructions of the liver,

and in hectic fever. Berunds found its continued use in hectic fever of decided advantage. The dose is from one to three drachms.

ÆTHER HYDROCIANIOUS. Prussic Ether. Hydrocyanic Ether. Oyanuret of Ethule. Advised to be used in place of hydrocyanic

acid. The dose is said to be from three to five drops.

ÆTHER HYDRIODIOUS. Hydriodic Ether. Iodhydric Ether. Obtained by carefully combining five parts of Alcohol, ten parts of Iodine, and one part of Phosphorus, and distilling the combination. By this process the phosphorus is converted, by uniting with the oxygen of the alcohol, into phosphoric acid, and the

ethyle thus set free is left to unite with the iodine.

Hydriodic ether is administered by inhalation, by adding a little by means of a pipette, to the bottom of a ground stopped bottle partly filled with water, which lessens and regulates the evaporation. The inhalation is conducted by placing the mouth of the bottle to one nostril, and then breathing the air and ether contained in the bottle above the water. The heat of the hand, or a slight agitation of the bottle, will cause sufficient evaporation of the ether.

The iodine passes directly into the blood through the thin pulmonary membrane, and but one or two minutes of time suffices to saturate the blood of the entire system with iodine. (See *In-*

halation.)

M. Huette, who contributed an article on the use of Hydriodic Ether to the Gazette Medicale, considered this one of the best methods of introducing iodine into the system, (See Iodine,) both on account of the facility of its application, and because it enables the practitioner to regulate with accuracy the amount of iodine that enters into the system. It also carries the metal without change, into the blood. M. Coffin is quite certain that he has arrested the deposit of tubercles by this method.

Perhaps it would prove equally beneficial to add Lugol's solution of Iodine, to chloroform and some of the aromatic tinctures, or Cologne water, and let that be inhaled in the same way. I have been accustomed to combine equal parts of Lugol's weaker Solution of Iodine, Chloroform, and Tincture of Conium, for an inhaling mixture, in tuberculosis, and think I have obtained very good results from the use of the mixture.

ÆTHER LIGNOSUS. Pyro-acetic Ether. Pyro-acetic Spirit,

which see.

ÆTHER PRUSSIOUS. Prussic Ether. See Æther hydrocynicus, and Prussic Ether.

ÆTHER PYRO-ACETICUS. See Pyro-acetic Spirit, Naphtha.

[To be Continued.]

IRON AS A PREVENTIVE OF ABORTION.

By T. C. MILLER M. D.

It is admitted by most physicians that it is often quite difficult to prevent a threatened abortion. Within two years I have treated nine persons with threatened abortion, each of whom had previously been attended by other physicians and without their being able to avert the accident. Some of them had aborted as many as four or five times previous to my taking charge of them.

I find abortion often resulting from diseases that are curable with iron. It is also sometimes the result of some organic disease, as of the liver, the spleen, the kidneys, etc. All my repeated experiments with the remedies reccommended by Drs. Morrow, Jones, and King, have failed; but the nine cases above referred to have all healthy children, after an easy acconchment.

FIRON IN RHEUMATISM.—Dr. Thomas Inmann, of Liverpool, relates a case of acute rheumatism treated successfully by the sesqui-chloride of iron. This salt of iron was given by Rademacher in rheumatism, fifty years since. I have heard many physicians deny that acute rheumatism, is, at times, complicated with endocarditis or pericarditis. I find the majority of cases of acute rheumatism to be thus complicated.

To treat these cases with depletion, either causes death or a protracted and imperfect recovery. Iron, or copper, according to the epidemical influences, and the condition of the constitution, cures these cases in from three to seven days.

When rheumatism is complicated with a disease of the liver or other organ, I find it advisable to give in addition to the metal, either the water of nux vomica, the tincture of cheladonea, or the tincture of blood-root. Now-a-days, I find that the nitrate of soda does not prove as beneficial as formerly in the treatment of rheumatism.

Iron may be given in a variety of forms, but the Prussiate, given suspended in the syrup of wild cherry bark, is one of the most convenient forms, and is but seldom unpleasant to the patient. Ten grains a day of this salt, is as much as the system, under ordinary conditions, can dispose of.

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GENERAL OBSERVATIONS ON THE TREATMENT OF FEVERS.

BY THE EDITOR.

Having considered the specific treatment to be adopted in the management of a number of Fevers, it seems proper to present some general observations in regard to the treatment of these diseases, which are so common, so distressing, and, even with the best of care and the highest professional skill, so often fatal in their termination.

The article on Fever, although brief, contains some ideas in regard to the nature, the part of the system affected, and the changes produced by what are styled by general consent febrile affections; and it now remains only to endeavor to draw therefrom some practical rules in the treatment of these affections, and in guarding against and remedying such local derangements and complications as are liable to be produced.

Whenever a physician takes charge of a fever patient, at whatever stage, or however violent the disease, he should make up his mind to bring the sickness, ultimately, to a favorable termination. And in order to accomplish this he must first carefully make himself acquainted, as far as possible, with constitutional peculiarities of the patient, the peculiar form of fever he is laboring under, and the morbid changes the disease may have produced in the organism of the sick one. With the possession of this knowledge, together with that of the treatment, if any, that has already been adopted, and the results of that treatment, a practioner who is endowed with patience and persevering adherance to the plan his knowledge and judgement will lead him to adopt, will pursue such a course that many eases of fever will ultimate in a final recovery even when apparently approaching a fatal termination.

The best and most judicious course of management may fail of success for want of a good and reliable nurse to second the efforts of the physician, and carry out his plans and directions. No case of fever, even if apparently trivial and unimportant, should be treated, without, if possible, having one person to act as nurse, who shall receive all the directions of the physician and carry them out carefully and faithfully and understandingly, and make a full report in return to the physician, of all that has transpired in the interum from his former visit. It is well, always, to explain the reason for what is ordered to be done, as then the nurse will feel not only the necessity of doing as she has been ordered because it has been ordered, but also because the directions will be in accordance with knowledge and reason. The directions had better be in writing at all times, and with some nurses and particularly in grave cases and where the nurse is kept awake during the night, written directions alone can be relied on. The nurse should also keep a careful note of the amount and appearance of the evacuations, as well as of the kind and quantity of the food and drink taken, and the effects, if any, observed to follow the use of any kind of food or drink. Relatives of the patient, especially if the disease is severe or dangerous, do not make good nurses, and others, not relatives, are to be preferred in most cases. Those closely connected by blood or other ties do not make good nurses to fever patients.

It will do no good to make visits too frequently. Once a day, or occasionally twice a day, so as to see the patient both in the morning and in the evening will usually answer as good and even a better purpose than can be answered by frequent visits or long tarries. Do not let the visits be made with such regularity as to hour as will lead the patient to expect a call at any definite time, or to feel anxious and troubled at any unusual delay. Neither make a positive or even implied promise to call at a definite hour without feeling quite certain that the call will be made at that time; and when such a promise has been made endeavor to have it fulfiled with the strictest punctuality.

Do not converse with the patient much, but obtain the needed information from the nurse, and to the nurse give the necessary directions and instructions. Listen patiently to all that may be

told in regard to the patient, but do not feel to much auxiety to change the treatment to meet all the lesser symptoms as they present themselves. There are manifestations or symptoms that will occur in the progress of fevers that indicate such present or prospective changes in the course of the disease as demand to be carefully noted and promptly combated by the proper remedies. Diarrhosa, dysentery, tympanites, hemorrhage, suppression of the urine, coma, delirium, and some other complications should always be watched for and promptly met as soon as they make their appearance.

Exhausting diarrhoas and dysenteries, with tympanitis, or meteorism, are quite apt to complicate enteric fever; and meteorism is a common condition in most forms of continued fever. Perhaps they are more frequent in Typhus than in Enteric fever. They also occur in various diseases of the spinal cord and the brain and their envelopes, in which cases there is an impairment of the nervous influence that governs the muscular coats of the stomach and bowels, producing relaxation and distension of the intestines from the accumulations of gas.

However meteorism is produced, or whatever be the form of fever it accompanies, it demands special treatment. External applications of the oil of turpentine, injections of an effusion of ginger, of bayberry, or of any of the aromatics and tonics, and in severe cases, the application of a mild but continuous current of galvanism for a considerable period of time, may be necessary, in order to restore the normal contractibility to the partially paralysed muscles and enable them to assume their natural contractile condition.

Closely allied to this partial paralysis of the muscles of the intestines is a paralysis of the walls of the bladder and of the detrusor muscles, so that the urine is retained and the bladder becomes painfully and dangerously distended. This condition, as well as that of meteorism within the bowels, will not be as likely to occur where the treatment has been such as to retain all the vital forces of the patients as in those cases that have been treated with depletion, but when it does occur it should be immediately recognised and promptly relieved.

When delirium or come of a dangerous amount are present,

cold affusions to the head, with sinapisms to the feet and legs, and a free, even full, supply of stimulants to the general system,—diffusible stimulants if repeated often and used for a considerable time are to be preferred,—and if necessary a cold douche, or cold affusion over a considerable portion of the system, will rouse the patient from delirium or throw off coma even if quite profound.

Whenever local congestions are manifested it will be necessary to take their peculiar nature into careful consideration. They are the direct result of the diseased condition of the blood, and it is only by restoring the fluids to their healthy condition that an entire cure of the local congestion can be affected. If the patient is supported with proper food, and the various emunctories are kept properly open, and the excreting organs properly active, most local congestions will disappear. But local treatment need not and should not be neglected. External stimulation by means of mustard, cloths wet with alcohol, oil of turpentine, and other agents, will be found to give great relief, and to expedite the cure.

The pulse should be closely watched, not mearly to learn how many beats there are in a minute, but to note all its qualities and changes so as to determine as nearly as possible the condition of the nerves and how much they are being influenced by the fever poison that is floating in the fluids, and therefrom deducing valuable conclusions in regard to treatment.

The condition of the bladder and the amount of urine that is passed, as well as the appearance of the urine, is of very great importance, and should be carefully noted at each visit. Most of the effete matter and the poisonous products of fever patients pass out of the system in the fluids through the kidneys, or as gases through the skin, and hence it is very important to note any changes in the urine, and promptly to remove any embarassment to the kidneys in the performance of their functions.

Attention should be given to the condition of the alvine dejections, but it is by no means important that there should be copious or even frequent discharges from the bowels. Many physicians as well as those who are not of the profession, seem to think that the great object of life, physically considered, is to have regular and copious discharges from the bowels; and many a well

person has been made sick, and many a sick one killed by attempting to keep up a free discharge from the alimentary canal when there was but little matter in the system that should make its exit in that direction.

Diarrhea and hemorrhages should be restrained, and when but little food has been taken there need be no fear if the bowels do not move for three or four days or a week. Even then a mildly stimulating and softening injection will lead the bowels to discharge themselves of anything contained in them without; the depressing effects sometimes produced by cathartics.

When the liver is engorged, a careful and cautious use of such agents as will relieve that engorgement is desirable, but cathartics are never required for that purpose, and should not be resorted to.

As has been remarked, pure atmosphere, with perfect cleanliness of person and of clothing, are of more value than medicine, and this fact should be thoroughly impressed upon the mind of the attendant, the nurse, and the patient.

From the very commencement of the disease until the full and complete recovery of the patient, the physician should constantly and continuously have impressed upon his mind, that, in fevers, there is a constant struggle between the vital forces of the patient and the chemical forces acting upon his organism, and he should ever endcavor to aid and uphold the vital power and to counteract and oppose any preponderance of the chemical forces, while the fever poison is counteracted or expelled from the system.

Nothing, absolutely nothing that tends to debilitate or exhaust the vitality of the patient should ever be allowed in the treatment of fevers. The inordinate action of the heart should be held in check by the proper sedatives, that the life of the patient may not be wasted and exhausted; the abnormal causes and the abnormal products of the fever should be destroyed or expelled; all the organs and tissues should be relieved of any embarassment or load; the various emunctories should be kept in the proper state for the easy and speedy expulsion of all abnormal products; the fluids of the body should be kept in as normal a condition as possible,—by the use, if necessary, of the proper

medicines, but mainly by the use of liquid foods containing nitrogenous, farinacious, and carbonaceous matters, broths, gruels, and soups when the digestive organs are incapable of properly acting upon more solid matterials, and by the use of preservative or anti-putrefactive agents that shall prevent both the blood and the solid portions of the system from even the commencement of putrefactive decomposition. Aromatics, the salts, and especially the chlorides and chlorates, and tonics, will be found very valuable preservatives of the organism from putrefactive and other degenerations.

Malt liquors, wine, brandy, and other alcoholic preparations also tend to preserve the system or any of its parts from degenerating. They also act, when taken in small quantities, to exalt the nervous activity and force; and when there is any torpidity or inactivity of the nerves the alcoholic preparations may be administered with very great benefit. But it should be remembered, that in Enteric fever where there is active inflammation of the mucous membrane of the alimentary canal, even a small quantity of alcohol may so increase that inflammation as to lead to perforation or other aggravations of the disease. It is never safe to give alcohol in enteric fever until convalescence is pretty well advanced.

Although convalescence progresses with considerable rapidity in some forms of fever, yet it is never safe to allow the patient to encounter any considerable labor or fatigue of either body or mind for a considerable period of time after apparent recovery. Many persons, from want of attention in this regard, have suffered a return of the fever, or have found that some part of the organism, and especially the nervous system, has suffered an injury whose effects have been felt for years, and perhaps for life. The necessity for very prolonged caution and care in refraining from mental exertion after a fever, should be particularly insisted upon by the physician, and especially if the patient is engaged in any occupation demanding a considerable amount of mental labor.

In some forms of fever, and more perticularly in those forms, like Yellow Fever, where the stomach and liver have been seriously involved, even when convalescence has made considerable progress, a moderate indulgence in smoking, or a very small

glass of alcohol has produced such disease of the alimentary canal as to cause a relapse and a fatal termination to the disease. Any fruit, as oranges, that is not quite ripe, or has commenced to decay, may also so derange the digestive organs as to cause a return of the disease. Great care should be taken to protect the patient from these and other causes of relapse.

The management of cases of fever has undergone more marked changes in the practice of physicians of different ages and countries than the management of almost any other form of disease. Courses of treatment, and special medicines, in vogue at one time, have been entirely discarded in favor of something quite different, which in its turn has met the fate of its predecessors. curials, antimony, bleeding, purgatives, emetics, and diaphoretics, and even the more modern ideas of exclusive stimulation, have each in turn been obliged to yield, and the more rational treatment of the present day, with sedatives in the place of depletion, and quiet support and aid to the vital forces in the place of all pertubative influences, with proper regard to the purity of air and cleanliness of person, and the medication and other treatment, as already detailed, with such variations and modifications as individual and epidemical peculiarities may demand, may be relied upon until the ever advancing improvements in medical science shall present some ideas more rational and more beneficial.

INCONTINENCE AND RETENTION OF URINE IN WOMEN.—GALVANISM.

BY DR. C. H. CLEAVELAND.

Without making extended remarks on the conditions of the general system or of the urinary organs which may result in a want of power to retain the urine the usual period of time, it may be proper to say that not unfrequently this condition is the result of a primary disease, either in the uterus or its appendages, which disease causes a mechanical pressure upon the viscus, preventing it from yielding to the increase of the quantity of retained fluid; or producing irritation and a greater or less amount of inflammation of the coats of the bladder, thus rendering it im-

pressible, and incapable of bearing the presence of the irritating fluid in contact with the extremities of the nerves. Another method in which derangements of the reproductive organs act to induce incontinence, retention, and even suppression of the urine, is from the induced condition of the entire nervous system and especially of those nerves branching from the great pneumogastric or sympathetic nerve, as it is called from its readiness to transmit impressions by reflex action from one extremity to any other extremity of the branches of the nerve.

Hysterical incontinence and suppression of the urine is one of the most common derangements of the urinary organs, as it is a frequent accompaniment of any derangement of the reproductive organs; and when thus produced, can be cured only by a cure of the primary disease. That galvanism properly applied, will do much if not more than any other one agent, has been conclusively proved by the experiments and observations of many eminent European as well as American writers; and that it will readily remove the troublesome difficulty under consideration is also attested by many who have tried it; and it may be well to cite a few of the instances recorded.

In the Edinburgh Medical and Surgical Journal for 1844, page 41, is a notice of the views of M. Froriep. "Incontinence of urine," says he, "frequently comes on after severe rheumatic and gouty affections;" and he refers these troubles "to a local affection of the bladder itself, to an affection of the nerves, or muscular fibre, or both." In his work on the treatment of Rhematism by means of galvanism only, as translated by Mr. Lawrence, of London, are the notes of several cases in which this troublosome symptom was present but speedily disappeared on the application of galvanism. Some of these cases had assumed the hysterical appearance, but more had not; yet all doubtless had their origin in a derangement of the functions of the nerves. Taking this view of the matter, M. Froriep determined to try galvanism for their cure, and in every instance it appeared immediately to give relief and a radical cure soon followed.

In Golding Bird's "Lectures on Electricity and Galvanism," pages 147 and 188, the learned professor says: "Dr. Radford has successfully employed the electro-magnetic current to restore tone

to the bladder when that organ has been paralysed by over distension during labor. It is well known that when the bladder has been long distended with urine a want of power to expel its contents often results, and this will often continue for some weeks so as to render the daily use of the catheter necessary. In a case of this kind following protracted labor, Dr. Radford passed a current from the electro-magnetic machine over the region of the bladder with the almost immediate result of restoring that organ to the dominion of the will.

In more than one case of want of power in emptying the bladder in hysterical girls, I have succeeded by passing a pretty strong current from the sacrum to the pubis. While on this subject I may allude to that very distressing incontinence of urine not uncommon in delicate, irritable children. This occurrence is most frequent at night, and is often very unmanageable. I have frequently applied the electro-magnetic current in cases of this kind, but I am sorry to say without any satisfactory results. A celebrated German Physiologist, M. Froriep, has been more successful. He states that he has generally succeeded in curing his little patients."

When it is recollected that Retention of the urine may be the result of paralysis of the fundus of the bladder, either through some disorder of the nerves distributed to that part or of the muscular tissue itself by over distension or from other causes, and that Incontinence of urine is frequently the result of a paralysis of the neck of the bladder, preventing the closing up the sphincter muscle, there will be no difficulty in deciding how each of these opposite conditions may be cured by the agent which shall rouse those nerves and those muscles from their paralysed state. Hence, while treating of this subject in the N. Y. Journal of Medeine for July, 1847, Dr. H. P. Dewees was led to remark:

"Intestinal, uterine, or vesicular paralysis, frequently ensue from concussion or other spinal injury, giving rise to some of the most indomitable forms of functional disorder. The most remarkable and severe case coming under my notice resulted from a sudden fall across the arm of a rocking-chair. The concussion on the spine was so great that insensibility with trismus ensued instantly, followed by violent muscular spasms and convulsions

resembling those in hydrophobia. The result of this accident was paralysis of the bowels, bladder, and lower extremities, with tetanic spasms. She was perfectly restored under the treatment employed, consisting in the free use of internal and external stimulants and the application of the continued galvanic current. The vesical inertia was overcome by passing a galvanic stream from the rectum and spine to the supra-public region, and through the uretha by a silver catheter, the positive pole being placed upon the spine. I was led to employ galvanism in vesical paralysis from the result of some of my experiments on animals with the current. By passing a strong stream, (interrupted at pleasure,) through the lower lumbar and sacral nerves of the animals (dogs,) I have caused the bladder so to contract that, on post-mortem examination it seemed more like an hypertrophied uterus."

In the London Medical Gazette, M. Heller, of Stuttgard, relates the case of a carpenter who from a fall injured his spine so as to produce paralysis of the bladder and partial paralysis of the rectum. These palsies resisted the general treatment adopted and pursued for two weeks, yet yielded after a few applications of galvanism, and after a little time the patient was fully cured.

A case is related by M. Hæring, in the Ency. des Sciences Medicales, for June, 1847, of a woman aged 60, who while suffering from prolapsus uteri was attacked with paralysis of the bladder. She was cured by a few applications of galvanism.

Dr. T. Radford, as reported in the Provincial Med. Jour. for December, 1844, speaks of a case under the care of himself and Dr. Goodwin, who after protracted labor was suffering from retention of urine. One application of galvanism sufficed to relieve her permanently.

Dr. Althaus says that paralysis of the bladder and consequent retention of the urine, or, perhaps incontinence of urine, frequently arises from a primary disease of the brain or spinal cord, in which cases galvanism can do no good, while in other cases it proves very beneficial. Dr. Graves, in his Clinical Medicine, relates a case of a man 70 years of age, who had paralysis of the bladder cured by galvanism.

Drs. Goodwin and Radford cured a case of paralysis of the bladder, in a lady, after labor, with only one application of gal-

vanism. Dr. Fraser relates a case of paralysis, distention, and consequent retention, in a patient 60 years of age, in which he tried ergot without benefit but cured his patient by the use of galvanism.

Dr. R. Reynolds reports frequent cures of a similar paralysis by the use of the galvanic current.

Quite numerous cases proving the value of the galvanic current in diseases of the bladder have been reported in the medical journals for the last ten or fifteen years, an epitome of which can be found recorded in Braithwait's Retrospect, and in Rankin's Abstract.

It has been advised, in the application of galvanism to the bladder, to introduce a metallic catheter into the bladder connected with the negative pole of the battery, while the current is applied to the sacrum by the ordinary apparatus, but I have not found that method either agreeable, safe, or necessary. In cases of retention, of course the catheter may be required to be used, but its use is by no means always demanded.

A steady, gentle, continuous current, carried to the sacrum, and there applied through a sponge or wet napkin, and another applied to the pubes and vulva, and the negative pole of the battery connected by the ordinary conductor to that napkin, will cause the current to traverse the pelvis in the course of the sacral nerves, throughout the bladder, and restore to it its power of contraction. The current should be continuous and not too large or too strong.

It may be necessary to continue the artificial aid to the paralysed muscles for some time, and a belt that has copper plates to apply at the spine, and a zinc plate at the pubis, which are connected to each other with an isolated conductor and can be worn while the patient is about her ordinary avocations, is the best and most convenient apparatus for that purpose.

Where there is also displacement with prolapsus of the uterus, the galvanic plates can be so attached to an abdominal supporter, as to impart tone and contraction to all the relaxed pelvic tissues, and thus cure the disease of the uterus and its appendages at the same time the derangement of the bladder is removed.

ON THE PHYSIOLOGY OF DIGESTION.

Prof. Busch, of Bonn, has had an opportunity of making experiments on digestion upon a woman who had been tossed by a bull, and presented, in consequence of the accident, a fistulous opening communicating with the small intestines. The fistula was so complete that the bowel was divided into two perfectly distinct halves. The upper portion consisted of the stomach, the duodenum, and of a probably minute piece of small intestine; the lower portion was composed of the remaining part of the small intestines, the colon, and rectum. Through the upper half, the food introduced into the stomach, as well as the digestive fluids of the latter organ, the liver and the pancreas, escaped, no part of them finding their way into the lower half. This state of things was therefore favorable to the study of the action of the stomach, of the biliary and pancreatic secretions, and also of intestinal secretions independently of the liquids just named.

One of the first effects of the pathological state of this woman, was a considerable loss of flesh, as observed when she came into the hospital six weeks after the accident. Her appetite was, however, insatiable, though she was as weak as those animals in whom artificial fistulæ are made. She was also very drowsy and cold; but this temperature was merely objective, for a thermometer introduced into the intestine marked a normal heat. All these symptoms disappeared when the patient recovered a little strength in consequence of a generous diet.

She used to swallow an enormous quantity of food without feeling satisfied; but by thus eating largely she felt better, though still hungry. When the stomach was empty she felt ill. The woman was so thin that the coils of intestines could be seen through the parietes of the abdomen; and it was observed that their peristaltic movements were as energetic as those of that portion of the intestine situated above the fistula and open to view.

As the intestinal secretion or juice was perfectly pure and unmixed with any chyme, which latter all escaped by the fistula, a good opportunity was offered for studying the nature of that juice. Prof. Busch found the quantity always small, and tried its effects upon protein compounds, starch and, cane-sugar, these

being the first experiments of the kind ever made. The patient was at the same time fed by the introduction into the lower part of the intestines, through the fistula, of beef-tea, beer, soups with flour, meat, hard-boiled eggs, etc. Soon after these injections were resorted to, she had numerous stools, a circumstance which had not been observed since the accident. The evacuations had a well marked smell of putrefaction, without any undigested portions of meat or hard-boiled eggs being noticed in them; this being a clear proof that the intestinal juice acted as a solvent upon the food passing through the canal.

M. Busch used to wrap the various substances introduced in a piece of muslin, after having carefully weighed them, in order to observe the action of the intestinal juice. He noticed that it was principally upon starch that this juice exerted an energetic solvent power.

An interesting point was to find out what would become of fatty matter without the assistance of bile or pancreatic juice. According to expectation, fatty substances passed without being absorbed, or at least but a very small portion of them disappeared.

M. Busch also examined the state of the substances which escaped by the upper portion, namely, those which had been subjected to the action of saliva, the gastric juice, bile, and the pancreatic juice. A very extraordinary fact observed, was, the rapidity with which the ailamentary substances escaped. In from fifteen to thirty minutes after the ingestion of the food by the mouth, it was observed to escape by the fistula; hard-boiled eggs appeared in from twenty to twenty-six and thirty-five minutes; cabbage took from fifteen to nineteen minutes; meat from twenty-two to thirty minutes; potatoes fifteen minutes. When the meal was plentiful, complete digestion required from three to four minutes (?).

The substances which escaped by the upper end of the divided canal seemed at first sight to have undergone but little change; they were however, considerably softened, and the meat presented both longitudinal and transverse cracks or slits. M. Busch thinks that the fluid in which these substances were suspended contained no longer any saliva.

We add a few of the propositions which the author considers as proved by the experiments above enumerated:

- 1. The peristalic movements of the intestines are as vigorous when the bowels are covered by skin as when they are exposed to the air; they withstand the pressure of a column of water two feet high.
 - 2. The intestinal tube has periods of rest and motion.
- 3. The intestinal juice is secreted in small quantity; its reaction is always alkaline; and it contains, on an average, 5.47 per cent of solid matter.
 - 4. It decomposes starch and protein compounds.
 - 5. It changes starch into grape-sugar.
- 6. It decomposes protein compounds with the phenomena of putrefaction.
 - 7. It does not change cane-sugar into grape-sugar.
- 8. Cane-sugar, when wholly absorbed, does not re-appear in the urine.
- 9. Fat which has not been brought in contact with the bile or pancreatic juice, is either not absorbed, or, if so, in very small quantities.
- 10. The first portions of the food introduced into the stomach reach the first third of the small intestines, on an average, in from fifteen to thirty minutes.
- 11. Cane-sugar held in solution disappears almost entirely at the begining of the intestinal canal; any such cane-sugar which reaches the small intestine is changed into grape-sugar.
- 12. Unboiled white-of-egg is absorbed in the stomach, or the first part of the intestine; the portion which goes beyond has not undergone any change.
- 13. Gum is not changed into sugar; it passes into the intestines without alteration.
- 14. Gelatine becomes dissolved, and loses the faculty of coagulation.
- 15. Traces of caseine in solution are found in the intestine after the ingestion of milk.
- 16. Fat forms an emulsion with the finids which find their way into the small intestine when these fluids have an alkaline reaction; the emulsion is incomplete when they are acid.

- 17. The mixture of juices in the small intestine has a digestive action on the protein compounds.
- 18. The minimum of the digestive juices, which reach the apper part of the small intestine in twenty-four hours, weighs more than one seventeenth part of the whole body.—Archiv. fur Path. Heilk.

LYCOPUS EUROPÆUS.

I first became acquainted with the virtue of this plant from the use of it some years since by a "Root Doctor," who prescribed it in decocion as a remedy flatulent colic. It was generally successful, and I noticed that those subject to colic became under its use less so, and finally were cured of the predisposition altogether.

Some years afterwards, being myself troubled with a chronic inflammation of the spleen—a sequel of the Southern confiestive fever—which proved obstinate, I was led to try the L. Europæus; it removed the disease promptly.

I have since used it extensively in my practice, and the result of my experience—having prescribed it and watched the effects in a large number of cases—are as follows:

It has, in a considerable dose a mild narcotic effect, similar to to its congener, L. Virginicus, but weaker, aad not perceptible, unless the dose is very large. To this I attribute its power in relieving colic; but the property I most value is that of a stimulant tonic and general corroborant of the system, with a particular direction to the portal circle.

It is frequently used in this region in domestic practice for the cure of intermittents, and is often successful; but its febrifuge powers are not very great, not superior, if equal, to Salicine, or Cornine; but as a tonic in the debility following a severe attack of bilious disease, I prefer it to anything at present in use. I have seen a number of cases of hypertrophy of the spleen, "ague cake," removed by it alone; and a number of cases of long standing speedily removed by it, aided by the external use of iodine.

I think that those who have used it after a bilious attack, are less liable to a relapse, especially if exposed to malaria, than they otherwise would be.

I usually prescribe it in a saturated tincture, made by macerating the green herb in dilute alcohol; doses 1 to 2 drachms. The tonic properties of the herb are in greatest perfection when the plant is in blossom, the narcotic principle when the seed is ripe. It grows abundantly in wet places all through the Northern States.

PREPARATION OF ANTI-ASTHMATIC CIGARETTES.

M. Dannecy, Pharmacein of Bordeaux, writes:—"Some of the properties of stramonium and belladonna—which plants, when smoked, justly enjoy the reputation of relieving asthma, and which are employed with the most undoubted success in the treatment of neuralgia—exists also in plants abounding in nitrates. Thus I have seen patients who had experienced great relief from the use of the leaves of borage and pellitory plants containing, as is well known, much nitrate of lime.

"The fault which almost all patients find with narcotic plants, smoked in pipes or in the form of cigarettes, is a copious production of smoke, which fatigues them, and sometimes excites cough—a symptom they are, on the contrary, employed to allay.

"In order to obviate this inconvenince, I have added nitre to the leaves of belladonna and of stramonium, by watering these plants, dried and conveniently spread out, with a solution of nitrate of potassa, in the proportton of three ounces of the salt to rather more than two pounds avoirdupois of the plants. It will be easily understood that as this solution penetrates the entire vegetable tissue, the latter will, when dry, burn completely, without the formation of the pyrogeneous products above alluded to.

"I have for many years prepared cigarettes according to this formula, and the benefit derived from their use by a great number of patients induces me to publish it, and to call the attention of practitioners to this mode of treatment, consisting in the smoking of narcotic plants combined with nitre."

Sunshine in Sickness is a little American re-print of an English book, published by the Episcopal Book Society of Philadelphia, and designed to set forth clearly what the writer considers the spiritual duties of the sick.

An Oration delivered before the members of the Hunterian Society of London last February, by Stephen H. Ward, Vice-President of the Society, and printed at the request and by the direction of the Council of the Society for circulation among its members, on "Rational Medicine, its Position and Prospects," has been sent me by its author.

It is a clear, distinct, and manly exposition of Rational Medicine—such as would be expected from such a source and addressed to such an auditory, and must prove beneficial to all who heard it or give it a careful perusal.

An Essay on the Treatment of Phthisis by the Chlorate of Potassa; read before the American Medical Association at its Annual Session by Dr. E. I. Fountain, and republished from the American Medical Monthly, is a remarkably well written monograph, and calculated to attract considerable attention. Without doubt the Report Dr. Fountain will make to the Association next year will be of value and practical utility.

The Transactions of the State Medical Society of Indiana, at its Eleventh Annual Session, in May last, have been published, and indicate a healthful activity among the few physicians that are members of that organization. Among the Vice-Presidents I find the name of an old pupil, Dr. J. N. Green, of Shelbyville, who probably sent the pamphlet.

The London Lancet for November, and the British and Foreign Medico-Chirurgical Review for October, came freighted with their usual variety of valuable professional lore. No one who intends to keep pace with the constant advancements of the profession should be without them.

The North American Medico-Chicurgical Review for November is not only a very valuable number but also contains an Index for the Volume, from which we learn that the entire work for the year has worthily maintained its reputation as standing among the foremost of American medical periodicals.

Panna Root—A New Remedy for Tania.—This African product, apparently the root of Aspidium anthamanticum (Kunze)called Un Comocomo by the Zoolu Caffers in the neighborhood of Port Natal, from whence it has been imported to Europe, has been much extolled by Dr. Behrens, of Quedlinburg, Germany, against the different forms of Tænia. This root may be confounded, without close examination, with that of Aspidium felix mas, but is distinguished from it by a lighter color, a firmer and more compact texture, fewer but bigger stalks, smaller and darker scales, a smaller marrow, larger bundles of vessels, greater abundance af amylum, etc. Its principal character is formed by thirteen or more circularly arranged conglomorates of vessels appearing on the but of the stalk. Accorning to Dr. Behrens, in eighty-three cases out of ninety the Tænia has been expelled, head and all, without any difficulty by the Panna Root. Experiments, however, have not succeeded equally well with Among them Dr. Kuechenmeister found the Panna scarcely equal in anthelmintic virtue to the Pomegranate Root. The power of all such remedies can only be estimated, as he maintains, by their effect on Tænia mediocanellata; Tænia solium always, and with the utmost certainty, being expelled by the Ext. cort. granat. Such a power the Panna seems not to possess, and it is therefore not entitled to any preference, over other and long approved remedies, while it commands such an uncommoly high price-ranging in Europe from one to six Prussian Thalers for the quantity required in a single case. If the assertions of Dr. Kuechenmeister, who is certainly an authority in these matters, should be in some degree confirmed by further trial, of the new remedy there is certainly no need for its importation into this country, where it would very likely share in the shortest time the fate of the first so immensely praised, and now almost forgotten Cousso

This is the last Number of the "Journal of Rational Medicine," of the present volume, and subscribers should renew their subscriptions at once to enable the publisher to determine the number that will be required for the coming year. The Journal will be continued without any material changes except such as increased experience in the publication of a Medical Journal may dictate.

Several of the numbers for the year 1860, are entirely exhausted, but if those who have duplicate numbers will return them, I hope to be able to supply missing Journals to complete sets, without expense or charge.

